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FARM POLICY PERSPECTIVES: SETTING THE STAGE FOR 1985 AGRICULTURAL LEGISLATION

COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY
UNITED STATES SENATE

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FOREWORD

In 1985, Congress will undertake the task of rewriting the legislation which provides the underpinnings for America's farm and food policies and programs. Current law—the Agriculture and Food Act of 1981—expires with the 1985 crops of grain, oilseeds, and cotton, and now it is time to consider the future direction of these programs.

This task deserves our best efforts.

American farmers—and the vital industry of agriculture, which employs 24 million Americans—are too important to delay discussion of these programs. American agriculture generates economic activity accounting for 20 percent of our gross national product, employing nearly a quarter of the Nation's labor force.

Our Nation's farmers have achieved levels of productivity and efficiency unparalleled in human history. Through the private sector, agriculture provides the American public with an abundance and diversity of food, fiber, and consumer products at competitive prices.

Farm exports generated nearly 35 billion dollars' worth of earnings in 1983, the largest single positive force in our balance of payments. Every 1 billion dollars' worth of farm products we export generates 30,000 jobs in the private sector.

At the same time, the vital industry of agriculture has been hit by the upheavals of inflation, double-digit interest rates, a strong dollar, drought, worldwide surpluses, and a world recession. Farm program spending has reached new highs, and yet some farmers continue to go out of business for reasons often beyond their control, in spite of these massive expenditures.

Obviously, something is amiss, and it is clear that farm programs need a thorough reexamination. The 1985 farm bill provides just that opportunity.

The first step in the development of a new farm bill was taken on May 6, 1983. On that date, I sent a number of letters to farm organizations, land-grant universities, and agricultural policy specialists regarding the renewal of farm legislation in 1985.

My letter urged farm groups and others to conduct seminars and policy studies on topics related to the 1985 farm bill. Specifically, I asked interested persons to submit policy papers which could be published by the Agriculture Committee in preparation for the new farm bill. I put it this way:

I. GOVERNMENT

The U.S. Government operates a series of programs of direct and indirect assistance to the agricultural sector. While there is a consensus among policymakers that

agriculture's special nature makes some degree of intervention desirable, there is disagreement concerning the type and level of Federal assistance. What should be the Government's role in agriculture? The agricultural sector and the needs of farmers have changed markedly in the last decade. What functions should Government perform in order to meet the genuine needs of farmers and the consuming public in the 1980's and 1990's?

II. PROGRAM OPERATION

Both Congress and the executive branch have taken responsibility for farm policy and programs. In fact, during recent years Congress has increasingly mandated specific programs, rather than providing broad policy parameters for program implementation by the executive branch. What is the appropriate balance between the two branches of Government? Specifically, in your judgment, what should the role of Congress be in the establishment of farm policy and the mechanics of specific programs?

III. POLICY

Since the last comprehensive farm bill in 1981, several new initiatives, including the payment-in-kind (PIK) program and related changes in the operation and role of the grain reserve program, have helped shape the economic fundamentals of the agricultural sector. With an eye to recent agricultural experience, and keeping in mind the inherent diversity of American agriculture, what should be the policy direction of the 1985 farm bill and which issues should receive particular attention?

IV. COST

Record costs for Commodity Credit Corporation farm programs, coupled with persistently low crop prices and net farm income, raise critical questions about the cost effectiveness of Federal commodity programs. Moreover, the entitlement nature of these programs may contrast with the fact that Federal financial resources are increasingly limited. Are there more cost-effective approaches to farm programs, and what alternatives are viable?

V. PRODUCTION CONTROLS

Despite extensive Federal efforts to curb production and dispose of surpluses, excess supplies continue to characterize U.S. agriculture, raising questions about the adequacy of current programs to manage and dispose of surplus stocks. Can more efficient production control programs be developed and would mandatory controls be more effective than voluntary programs? Should production control programs be designed to meet other objectives, such as targeting them to erodible lands? Given that other exporting nations seem to expand production during periods of U.S. production control efforts, are production control programs effective or even desirable?

VI. DOMESTIC POLICY IN A WORLD ECONOMY

U.S. agriculture has become increasingly dependent on foreign markets for its economic well being. U.S. farm programs are predicated on high agricultural export levels. Is it realistic to expect continued high export levels over the coming decades? Increased exports leave the U.S. farm sector vulnerable to supply and price fluctuations in the international market. If exports continue to grow, can agricultural export policy be integrated into traditional domestic agricultural policy, or is a major revision of U.S. farm programs necessary to take into account the impact of increased participation in what may be an increasingly unstable world market?

VII. TRADE

In the past few years, U.S. agricultural export expansion has been constrained by a number of factors, including the unfair trading practices of other countries. What are the policy considerations, and what should be the U.S. legislative response, to the preponderance of agricultural export subsidies and nontariff trade barriers employed by U.S. export competitors and trading partners?

VIII. RESOURCES AND TECHNOLOGY

A new wave of technology is beginning to emerge that could outstrip the impact of hybrid corn and possibly even the internal combustion engine. Technological innovations, such as computer electronics, biogenetics and plant protein research,

could have significant impact on U.S. agricultural production and marketing. What effect are these changes likely to have on farm programs and policies? In addition, there is continuing concern about the management of scarce natural resources as well as the effectiveness of current land and water conservation programs. Can a better resource management strategy be developed and can this Nation look to technological advances to assist in this effort?

This committee print reflects the responses to our questions, and includes the excellent contributions of a number of writers.

Following my letter, a number of other steps were taken by various agricultural leaders to assist in the development of the 1985 farm bill. Senator Roger Jepsen conducted an excellent series of hearings in the Joint Economic Committee, which he chairs, on future farm policy. In mid-July 1983, Agriculture Secretary John R. Block conducted the first in a series of "agricultural summit meetings" involving farm leaders from all over the country in policy discussions. A number of universities have held seminars and conferences on farm policy. President Reagan has announced the establishment of an interagency Cabinet Council Working Group on Future Food and Agricultural Policy, and the House Agriculture Committee has announced that it will be conducting hearings on these issues this year.

Clearly, American agriculture merits all this attention. The decisions we make in the 1985 farm bill will set the tone and direction of farm programs for the last half of this decade and on into the 21st century.

The policy discussions in this document deal with the major grain crops and cotton. Unique crops such as dairy, sugar, peanuts, and tobacco have a different set of policy options.

The views expressed in the papers are the views of the individual authors, and do not necessarily represent my views or the views of the members of the committee.

The papers compiled here are only a sample of those received by the Agriculture Committee. I greatly appreciate the contributions of all those who submitted papers, even though it was not possible to include all of them in this committee print.

In fact, there are now a number of new participants on the scene who want to be more deeply involved in agricultural policymaking. These include farm supply industries and producers of livestock and poultry. Their views are not included in this document, since my letter was written before the major events of 1983 which spurred their interest, but they will definitely be involved in 1985.

I would like to thank the Agricultural Extension Service at North Carolina State University, the National Association of State Departments of Agriculture, and the Food and Agriculture Section of the Congressional Research Service, Library of Congress, for their help in compiling this material.

Clearly, there are vital policy choices facing American agriculture. This document explores policy options from a variety of viewpoints.

While it is wise to discuss these issues in 1984, it may not be in agriculture's best interest to actually attempt to adopt a 1985 farm bill in 1984.

During 1984, the voters of America will elect a President, 33 Senators, and 435 Congressmen. Farmers know that politics often

makes for bad policy. We should not play politics with our farm programs because they are too important to farmers and the public at large. Rather, we should pursue this dialog in 1984 so that a more informed Congress can make the actual decisions in 1985.

Whatever our policy decisions, there is one vital point which must not be forgotten. It is all too often overlooked by Congress and consumers. I am referring to the simple truth that no agricultural policy is going to work unless farmers have an opportunity to market their goods for a profit.

Profit is not a dirty word. When farmers can sell their goods profitably, they have incentive to produce—which assures that consumers receive abundant quantities of quality products. What's more, farm income multiplies throughout our economy and provides the foundation for real economic growth. Without the recognition of the vital role fair profit plays in our free enterprise economy, any farm policy is doomed to failure.

Agriculture is at a crossroads. I hope this document will be helpful in setting up some signposts so that we can see our choices more clearly, and make them more wisely.

JESSE HELMS, *Chairman.*

SUMMARY

American agriculture is a massive, diverse economic enterprise. This document reflects the diversity of agriculture, in a cross section of views and perspectives. Viewpoints range from that of suppliers of credit and other farm inputs, to the academic world, to farmers themselves.

USDA

I. Dr. Bill Lesher, Assistant Secretary for Economics at the U.S. Department of Agriculture, sets the stage for the 1985 farm bill by describing the 1981 farm bill and the changes in economic conditions which have occurred since then.

FARMERS

II. Robert B. Delano, president of the American Farm Bureau Federation, makes the case for a market-oriented agricultural policy. Terry Murphy of the Montana Farmers Union emphasizes the need for mandatory production controls. Raymond Riechelt, a retired farmer, suggests a two-price plan which would differentiate domestic prices from world market prices. Kalo Hineman, a Kansas farmer who serves on the Commodity Futures Trading Commission, describes the role which agricultural options contracts could play in the farm economy.

ECONOMISTS

III. Luther Tweeten of Oklahoma State University describes the structure of American agriculture in terms of farm size and classes. Harold Breimyer of the University of Missouri makes the point that the traditional reasons for Government involvement in agriculture are still valid. Ed Schuh of the University of Minnesota emphasizes the impact of macroeconomic and monetary policy on the farm economy.

Don Paarlberg of Purdue University points out the need for greater flexibility in support levels. Harold Guither and his colleagues at the University of Illinois note that in recent years the agricultural sector has changed to a much greater degree than have those Government programs intended to serve agriculture.

Desmond O'Rourke at Washington State University suggests that Government programs may not increase stability of farm prices and incomes, contrary to their stated goals, and proposes that program benefits be targeted to a core group of farmers. Barry Flinchbaugh at Kansas State University describes the proposal of a Kansas working group to set up a single, independent commission to implement farm policies and programs.

Lyle Schertz and Ken Clayton of the U.S. Department of Agriculture suggest that the problem of instability could be countered by options on futures contracts, revenue insurance, or tax credits. John Hunter at Cook College proposes that a two-price system be adopted, if necessary, to allow both an export price that is competitive and a domestic price that provides U.S. growers their costs of production.

Leo Polopolus of the University of Florida makes the point that agricultural economics research and education should be broadened to include more of the food system beyond the farm. Joseph Purcell of the University of Georgia emphasizes the impact of monetary policy on the agricultural economy.

STATE DEPARTMENTS OF AGRICULTURE

IV. Commissioners of various State departments of agriculture from around the Nation express their views on future agricultural policy. The Kansas working group described by Barry Flinchbaugh above outlines their proposal for a long-term policy to be implemented by a single, independent governmental institution.

LENDERS AND PRIVATE INDUSTRY

V. George Irwin of the Farm Credit Administration makes the point that a governmental role in assuming risk in the farm economy is important to agricultural lenders. Marvin Duncan of the Federal Reserve Bank of Kansas City notes that as agriculture has become more interdependent with the world economy, domestic price guarantees which are insensitive to world markets can have adverse effects.

Joseph Coffey of Southern States Cooperative writes that Government farm programs which are intended to be solutions all-too-often create new problems. Joe Halow of the North American Export Grain Association emphasizes that trade is vital and that the United States should deal with surpluses by disposing of them, rather than unilaterally cutting production.

POLICY ALTERNATIVES

Various policy alternatives are further described in the document. Ron Knutson of Texas A&M University and Bruce Gardner of the University of Maryland debate the merits of mandatory production controls.

APPENDIX

The appendix includes a description of the major farm and food legislation expiring in 1985 and suspended legislation again becoming effective, along with a glossary of farm program terms.

OTHER PUBLICATIONS

In addition to this document there are a number of excellent sources of information on alternative farm policies. The Council for Agricultural Science and Technology has published a report entitled "The Emerging Economics of Agriculture: Review and Policy

Options." The University of Missouri has published the proceedings of their national agricultural policy symposium.

As required by the Agriculture and Food Act of 1981, the Secretary of Agriculture appointed a Task Force on Farm Income Protection Insurance and that task force has issued a report on its study. Similarly, Jim Vertrees of the Congressional Budget Office has written a study entitled "Farm Revenue Insurance: An Alternative Risk-Management Option for Crop Farmers".

The report of the President's private sector survey on cost control in the executive branch makes extensive suggestions for reducing the cost of Government programs, including agricultural programs. The Joint Economic Committee, chaired by Senator Roger Jepsen, has printed a report on "The Changing Economics of Agriculture". Copies of these documents should be available from the groups which published them.

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PERSPECTIVES FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE

FARM POLICY UPDATE AND PERSPECTIVE

(By Hon. William G. Lesher*)

Over the last 3 years, agriculture has experienced a series of unprecedented events that have brought current farm policy to the forefront of discussion. Since the passage of the 1981 farm bill, it has become clear that present farm policy tools are not effectively dealing with the inherent volatility and uncertainty in agriculture. Given that situation, we must look at the basic policy changes that agriculture must face in the long run, in particular, the new omnibus farm legislation that will be up for renewal in 1985.

This paper will review the events that occurred since the passage of the 1981 farm bill and provide an assessment of the effects of that legislation including the circumstances that led to the implementation of the payment-in-kind (PIK) program. However, the major thrust will be to discuss the future direction of agriculture policy and to focus attention on the basic issues that will dominate the debate and determine the type of agriculture the United States will have through the rest of the century.

The 1981 farm bill

At the time the 1981 farm bill was formulated, the main concern was that world food needs would outpace production. Many believed—inside and outside of Government—that the agricultural issue of the 1980's was going to be how to produce enough for a starving world rather than surpluses. Many also believed that the United States was the only country that possessed the potential to expand food production enough to meet world needs. During the decade of the 1970's, the volume of U.S. exports increased by over 150 percent in response to the growing world demand. This growth in world demand is evidenced by an increase of nearly a third in world grain consumption and a rise in oilseed consumption of over 50 percent. The situation is similar for other major farm commodities produced in the United States.

At the same time, there was great concern over inflation and rising production costs. Inflation was running at double digit rates, the prime interest rate was around 20 percent, and inflationary psychology was influencing all business decisions.

*Assistant Secretary for Economics, U.S. Department of Agriculture.

Thus, the 1981 farm bill was developed in a climate of extreme optimism for growth in exports and pessimism over controlling inflation rates as land prices were escalating beyond what any farmer could pay for out of production revenues. Even with this environment the administration believed that conditions could change and sent a bill before Congress that contained no mimium commodity loan rates or target prices. It also had flexibility concerning the dairy price support level. In other words, the bill the administration developed would have given the Secretary of Agriculture more discretionary authority for controlling price support levels and farm program costs. At that time, it had become evident that indexed entitlement programs were causing a major part of the budget deficit problem.

While the 1981 farm bill that was eventually signed contained provisions for higher loan rate minimums (though not escalated through the life of the bill) and annual target price increases of 3 to 5 percent, it appeared workable. At the same time, it seemed to represent an effective compromise between the administration's initial bill and the congressional concerns that support levels would be too low.

It is important to note that the 1981 farm bill passed the House of Representatives by only two votes. And, the closeness of the vote was because it was perceived by many that it provided too little to farmers. Indeed, many in the Congress and elsewhere called it a "do nothing" bill for farmers. At that time, the administration was criticized repeatedly for being too worried about budget deficits and not enough about farmers. Some economists suggested that farm incomes would drop because loan rates were too low.

Unforeseen events

In just 2½ years, the farm bill that was thought to be potentially workable at the time, has become unworkable. The rigid price support levels set in the 1981 farm bill have come back to haunt agriculture by working against us in a time of very competitive world markets. The target prices thought to provide only moderate income support turned out so high that they were inducing increased production both here and abroad.

How could all this happen in such a short time span? First of all, the world became gripped in the worst and most pervasive recession in modern history. With this came a downturn in world demand that saw U.S. agricultural export volume decline for the first time in 13 years. A sharp rise in debt worldwide, especially among middle and lower income countries, restricted the ability of many countries to import since an increasingly larger portion of their income was required to service debt. In addition, the rise in debt reduced available credit needed to finance imports. Thus, as the financial condition of many of our prominent foreign customers, such as Eastern Europe, Mexico, and Brazil steadily worsened, their purchases from us plummeted. U.S. export volume in fiscal year 1984 is projected to be 15 percent below 1980—the fourth straight year of decline.

Meanwhile, the value of the dollar steadily increased as foreign investors sought the security and high rates of return from American investments. The increase in the value of the dollar meant that

our products were becoming more expensive in terms of the local currencies of our foreign customers. Thus, American products became less competitive in world markets and our volume of trade suffered. As an example, over the past 2½ years, the dollar has increased in value by about 50 percent compared with the German mark. This means that even if U.S. prices had remained the same over the past 2½ years, prices in German currency would now be 50 percent higher. Such effective price increases are bound to reduce demand.

To make matters worse, the downturn in world demand was accompanied by increased tariffs and subsidization practices by some of our major foreign competitors—most notably the European Community (EC). For example, the EC just recently increased its subsidy for wheat flour in order to take over a larger portion of the Egyptian wheat flour market—a market that the EC could not sell one bushel into without massive subsidies. Other countries such as Japan continue their policies of limiting access of certain agricultural products through quotas and nontariff trade barriers.

Other factors beyond anyone's control, such as the weather, also compounded our problems during this period of stagnant demand. Unusually good weather worldwide during the 1981 and 1982 growing seasons resulted in record crops at home and good crops abroad. While bountiful harvests are welcomed, the record grain harvest of 1981 and 1982 came at a time of slack demand and resulted in the largest surpluses in history. The large surpluses continued to overhang the market until 1983, and this led to reduced prices and incomes for many farmers. The price of corn in late 1982 at local elevators was below $2 per bushel, while the price of cotton was under 60 cents a pound. Many other commodity prices were also depressed.

PIK—A temporary measure

By the fall of 1982, it became obvious that the traditional commodity programs were insufficient to deal with the huge surpluses on hand. In fact, certain aspects of these programs were encouraging more to be produced. With budget outlays soaring, paid cash diversion programs of the magnitude needed would have been irresponsible from a budget standpoint. Moreover, such programs would not have resulted in the necessary acreage reduction since the payment limitation would have restricted program participation. Voluntary acreage programs of traditional size and type had proven ineffective in reducing supplies since yield increases largely offset the reductions in acreage. A special program was needed to specifically address the immediate needs of agriculture. At that time, the administration formulated the payment-in-kind (PIK) plan and went before Congress to seek approval. After failing to gain congressional approval for two changes in current law needed to operate the PIK program as it was envisioned, a revised version of the PIK program was implemented in January 1983 under existing authority.

As a stopgap measure, PIK was the best alternative available to deal with the record surpluses overhanging the market. Simply put, it did not short the market and was the least costly approach since it used Government stocks and secured loans as payment for

the acreage taken out of production. This contrasts greatly to a paid cash diversion approach which would have extended budget exposure and shorted the market.

While PIK created a dilemma for farm input suppliers, a number of manufacturers and dealers had already experienced several difficult years as farmers, faced with low incomes and rising debt payments, reduced use of energy-based inputs, and deferred purchases of capital goods. Balancing the short-term effects to the farm input industries, PIK contributed to a rapid and positive turnaround in the farm economy. Compared with prospects in the absence of a PIK program, the outlook for U.S. farm input industries in 1984 and future years is much stronger.

The PIK program met its intended goals, namely, reduce acreage and potential production while maintaining adequate supplies and putting farmers on a sounder financial footing. However, in combination with the worst drought in 50 years, crop supplies were reduced more than initially expected. Although no one expected a drought as extreme and widespread, there still will be enough grain and cotton to satisfy all domestic and foreign needs.

Feed grain supplies are now much lower than earlier anticipated due to the drought. In fact, current corn production is estimated about 2 billion bushels below what crop expectations were last July. However, due to record carrying stocks, corn supplies in 1983/84 will still be large enough to satisfy total needs and leave carryout stocks near the levels experienced in the mid-1970's. Also, carryout stocks for cotton and rice are now expected to be about 50 percent lower as a result of PIK, near more reasonable levels. Record wheat yields were experienced as most wheat types were mature prior to the drought. These yields sharply reduced the effectiveness of PIK in reducing excessive wheat supplies. Although estimated ending 1983 wheat stocks, at 1.4 billion bushels, are above the desired range, without the PIK program ending stocks would have been a fifth larger.

Lessons to be learned

Having experienced the largest surpluses in history, the largest acreage reduction ever, and the worst drought in a half century—all this in just over 2 years—what have we learned? The most obvious conclusion that comes to mind is that no one can predict the future, and that agricultural policy must be flexible in order to respond to the quick and drastic changes that can affect it.

It is clear that the rigid price supports of the 1981 farm bill helped cause our record surpluses and farm price support outlays. The mandated support prices, above market clearing levels, reduced our competitiveness in world markets. And what is worse is that these policies are still in effect. These are policies that encourage production when at the same time we have implemented the largest acreage reduction program ever.

The administration's concerted efforts last spring and summer to seek the statutory changes needed with regard to more reasonable target prices were largely futile. While it seems that there is a solid majority in the Senate and House of Representatives favoring these necessary changes, the will of the majority was thwarted by a small minority, most likely to the long-term detriment of agricul-

ture. Now, it appears that it is almost impossible to achieve new legislation, or approval for changes needed in current law, to make farm programs more responsive to changes in the economic environment. It is that realization that makes it imperative that the next farm bill have built-in the flexibility that is needed at the beginning rather than relying on drastic midcourse corrections.

Take dairy as another example. Over 2 years ago, the administration took extensive action to try to bring the dairy program under control. At the time, Federal outlays for that program were projected to exceed $2 billion annually, an average of about $10,000 per commercial dairy farm. In 1982, after months of debate, we ended up with an assessment program that came out of a congressional conference. Nobody liked the solution although it was adopted over the administration's opposition and added to a larger Governmentwide budget saving package that had to be implemented. The Department of Agriculture was forced to implement the assessment program to help curb the enormous costs of the dairy program. It was the only tool that Congress provided to deal with the dairy problem.

The outcome was predictable. The dairy surplus problem continued unabated while farmers clamored for a better solution. The administration worked with the Congress to develop new dairy legislation in an effort to reach a more equitable and workable solution to the problem.

The legislation recently signed into law represents a compromise among all concerned parties. In addition to providing a drop in the price support level, it also creates a new program which will pay dairy farmers for not producing milk which philosophically runs counter to the administration's policy of a more free-market agriculture. However, faced with the reality that both Congress and a major portion of the dairy industry continue to reject the administration's approach for flexibility in adjusting the price support level and the prospect of continuing current law, it represents the most feasible means of addressing the surplus problem.

Effective agricultural policy does not come easy. Furthermore, it has become obvious that rigid long-term policy is dangerous and self-defeating. Now that stocks have been reduced, it is critical to formulate future farm policy that will ensure that we do not return to the pitfalls of just a short time ago.

In short, for the past 2½ years we have been struggling with farm legislation that was designed for an economic environment that never materialized. Frustrated in our attempts to obtain congressional approval for needed changes in legislative authority that was too rigid, the administration has attempted to hold the farm economy together with a series of actions designed to minimize the damage, as well as continue to try to position this sector of the economy for a much needed correction. Nevertheless, it has become apparent that we all will have to live with this uncertain situation for awhile longer—at least until we get the flexibility that is required to keep agriculture out of the surplus situations we have endured recently and will allow us to meet unforeseen situations.

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Future directions

Agricultural policy has reached a critical point—a watershed period. It is extremely possible that if an appropriate agricultural policy is not developed and implemented in the 1985 farm bill, there could be irreparable damage to our farm and agribusiness economies, and thus the total economic standing of the United States.

In preparing for the debate over the 1985 farm bill, it is important that everyone with a stake in the future of U.S. agriculture—producers, consumers, processors, marketers, suppliers—become involved now. The Department of Agriculture has been encouraging this, beginning with the agriculture summit last July, and later through policy speeches across the country. This is the time to formulate ideas, conduct analyses, discuss the issues, and evaluate alternative policy directions.

That does not imply that there is a need to reinvent the wheel. The foundations for a new agricultural policy already exist. However, the 1985 farm bill debate shouldn't focus inordinate attention on some nonproductive, nontraditional proposals. Indeed, some of the following fundamental issues facing agriculture merit closer examination and better understanding.

The size and distribution of benefits.—One basic question going into the debate on the 1985 farm bill could very well be the amount and type of income transfer from the nonfarm to the farm sector. Farm program costs have risen from $4 billion in fiscal year 1981 to about $19 billion in fiscal year 1983, due largely to high support and target price levels. With large Federal budget deficits and, consequently, cutbacks in many domestic programs, the concern that public support for farm programs could wane is very real. While the public will probably continue to support a reasonable level of income protection for the farm sector, there appears to be increasing public disfavor over the size of farm program costs. As a result, there is going to be much interest in who should receive the benefits.

Several decades ago there was general public concern that some type of income transfer to the farm sector was needed to improve the quality of farm life. During more modern times there appears to be no apparent disparity between the quality of farm life and nonfarm life. In fact, there appears to be a "back-to-the-farm" movement at the present time. Today most people are on the farm because they want to be there, and not because they are forced.

Furthermore, about 12 percent of today's farms market about two-thirds of all farm products. The average family income of this group of farms is over $65,000, well above the median family income of nonfarm families. In addition, 60 percent of all farms account for only 10 percent of total farm sales. However, this group of farms only relies on farming for one-sixth of their incomes. The remaining 28 percent of farms account for about one-fourth of all farms sales and receive about 60 percent of their income from the farm.

In other words, agriculture and farm life have changed drastically in the last few decades. And, the time is approaching when the public will require a comprehensive review of the degree and distri-

bution of income protection provided to the farm sector, and the legitimacy or need for achieving the stated objectives.

Given that the public will continue to support agriculture to ensure a continuous, adequate and wholesome supply of food, who should receive this support and by what means? Should there be a payment limitation or should producers be provided income protection in direct proportion to their output? Should there be conditions placed on recipients of program benefits with regard to performance criteria concerning sound soil and water conservation practices? These are all fundamental questions that must receive careful scrutiny for the 1985 farm bill debate.

Irrespective of the size or distribution of future farm program benefits, income transfer to the farm sector should not be made in such a way that it disrupts resource allocations and distorts market signals. Our recent experience with large crop surpluses and depressed prices is a prime example of what can happen when farmers produce for Federal programs and not the market. High program costs, large surpluses, and low prices are the results.

Acreage reduction programs.—There is a need to scrutinize the effectiveness and viability of acreage control programs with regard to future farm policy. Should we have them given the fact that no other country cuts back, for example, its wheat production? Are such cutbacks really effective? If they are to be retained as a farm policy tool but are not currently effective, can they be made to be more effective? Questions like these must be asked—as just witnessed by the need for the most massive acreage reduction program in history on the heels of more modest but traditional acreage reduction programs.

A review of recent commodity programs suggests that limited acreage reduction programs are largely ineffective, especially if there is unusually good weather which results in record yields. In great contrast to the drought producers suffered this year, in 1982 record corn and wheat crops were experienced despite acreage reduction programs of 10 and 15 percent, respectively.

However, weather is not the only reason that the 1982 and other modest acreage reduction programs were largely ineffective. First of all, it is common knowledge that producers first take their worst land out of production. Second, the effectiveness of recent programs has been restricted because some of the larger farms are precluded from participation by the payment limitation. This certainly includes some of the 12 percent of farms that account for about two-thirds of all farm cash receipts. Third, it appears that some of the more efficient producers outside the programs expand production in the face of commodity programs, knowing that the Government will try to support prices by higher loan and target prices, storage programs, PIK programs, or whatever is necessary. As an example, corn yields on participating farms in 1982 average about 12 percent below the national average while wheat yields on participating farms were nearly 20 percent below average. Fourth, while the United States attempts to reduce production through acreage reduction programs, some of our foreign competitors continue to expand production while exporting surplus commodities and processed farm products using massive subsidies. Still others defend very high internal farm prices and inefficient production through

import barriers. Thus, the United States, as the largest residual supplier, has had to make major adjustments at considerable expense.

This indicates that recent farm programs have tended to shelter some of the less productive farmers while encouraging others to produce to their fullest capacity. They know the Government will foster higher prices by whatever means available when facing such large budget exposure.

Some have suggested tightening up acreage reduction programs to make them more effective. As has been demonstrated, the very nature of limited acreage reduction programs makes this difficult at best. Others have suggested cross compliance as a means of shoring up acreage reduction programs. Both views ignore the political realities that when any kind of tightening up of the programs is offered (such as cross compliance, restrictions on summer fallow, or mandatory controls on haying and grazing) the Congress will rush to try to prevent it from happening—at least they always have in the past.

While cross compliance may provide limited value for certain commodities or regions of the country, there are also costs. Cross compliance could be particularly detrimental to participation in commodity specific programs. For example, a producer with a large wheat base and a small corn base may only want to particpate in the feed grains programs. However, under cross compliance he may very well not participate at all rather than being forced to participate in both commodity programs. Moreover, if cross compliance was administered as it has been in the past, it would be structured to control the total acreage in production, not individual crop acreages, by establishing a normal crop acreage for each producer. Thus, there is no assurance that less wheat, corn, or another commodity will be produced on farms that are participating in the programs.

In view of the ineffectiveness of limited acreage reduction programs in the past, perhaps it would be instructive to go a step further to determine whether or not acreage reduction programs, in general, are in the best long-term interest of agriculture.

A quick look back into history might add a little perspective to this. In 1930, the United States harvested 1.1 million acres each of two different crops, peanuts and soybeans. Peanuts have operated continuously under a program of rigid production controls, artificially high prices and little regard for world markets. Soybeans took another approach, opting for no production controls, minimal price supports and total exposure to world market conditions. By 1980, the United States was harvesting about 1.4 million acres of peanuts, up only slightly from 1930, and about 68 million acres of soybeans. The farmer's value of production for peanuts was about $500 million while the value of soybean production was about $13.5 billion. While there are differences between these two industries, there is an obvious lesson to be learned.

Another good example of the long-term effect of reducing supply and increasing price was vividly described by Don Paarlberg in a recent speech. In 1930, the United States was producing more than 14 million bales of cotton per year. This amounted to more than half of the total world production. In 1983, after 50 years of re-

duced acreage, the United States produced about 7.5 million bales, almost 50 percent less than when the cotton program began. Meanwhile, foreign production of cotton has increased to 58 million bales, more than seven times as much as the United States. In the short term the cotton programs over the years may have increased income to producers but in the longer term they most likely have hurt the industry.

Tobacco is another example. Over the past 20 years, U.S. tobacco production has declined about 10 percent while world production has nearly doubled. Meanwhile, our share of world tobacco trade has dropped about 50 percent due to our escalating support prices that have made the United States less competitive in world markets. It requires no exhaustive analysis to determine what guaranteed price supports and controlled production did for tobacco. Is it in the best interest of agriculture, or the public for that matter, to consign other major commodities to the same fate?

Commodity loan rates.—For some time now the administration has advocated that the levels of our current loan rates and target prices are not in the best long-term interest of agriculture since they are so out of line with market realities. USDA has used what little discretionary authority that is available and lowered loan rates for wheat and rice. In addition, we proposed and argued for a freeze in target prices for wheat, feed grains, rice, and cotton. Lower loan rates and target prices would reduce the incentives for major U.S. competitors to expand agricultural production. The loan rate provides a price floor that other countries can depend on. Moreover, unrealistically high target prices provide such budget exposure that our competitors know that the United States will be forced into acreage reduction programs to raise prices above the loan rate. Thus, our policies aid foreign producers in two ways—more bushels or pounds which can be sold at higher prices.

Lowering loan rates for wheat, for example, is a temporary measure under existing authority to help expand demand by getting prices more in line with market-clearing levels. However, will that action alone solve the problem? It would seem that loan rates must be flexible and they must reflect market conditions; otherwise they distort market signals. The recent experience with loan rates for soybeans, based on a moving average as provided for in the 1981 farm bill, is instructive. Such a mechanism, if the rate is set at an appropriate percentage of past market prices, would reduce farmers' risk while not seriously interfering with the signals that the market must send. Export demand for soybeans has remained strong, even in the face of a stronger dollar, in contrast to the demand for some other major commodities such as wheat and rice.

Loan rates cannot and should not be above market clearing levels. In addition, they shoud be set at a level that will not shelter inefficient producers. Furthermore, the level of loan rates should not be set at rigid, anticipatory levels in legislation. We have just witnessed the shortcomings of such policy actions. Nonetheless, there is a need for loan rates to provide some price protection for our farmers. However, it is imperative that the formula or manner for determining the level of loan rates reflect domestic and international changes in agriculture and the economy, and not be subject to political or other forces.

Farmer-owned reserve.—There are indeed ways of enhancing income that are sound in the long run and some that are not. More specifically, should the farmer-owned reserve be used as a direct means to enhance prices?

I think not. On occasion, prices can rally in spite of record supplies, simply because most of the surplus is locked up in the reserve and not available to the market. However, when farmers produce for a reserve and the production is locked up, it hangs over the market and depresses prices for years to come. The economic losses for our farmers in the long run are great. Other countries benefit as the United States demonstrates it is ready and willing to bear all of the costs of smoothing out the grain markets and reducing their producers' risks, allowing them to increase production.

What is the appropriate role of the reserve and for what crops? Can or should it really be used to enhance income over the long run? Does a reserve contribute to economic efficiency by reducing market extremes? Is there a real need for a Government-sponsored reserve that is open-ended? If it is not open-ended, then how much is enough?

It is readily apparent that more information is needed about the appropriate size of the reserve and the level for the release price, as well as the make-up, stability, and total amount of storage incentives. Finally, careful consideration should be given to developing relatively stable, self-correcting program rules for the reserve—rules that would be sensitive to underlying trends in the agricultural economy and not to short-run events.

New agenda issues

There will be additional items added to the agenda for the 1985 farm bill. These are areas that those in the agricultural community must discuss and, perhaps, even take a stand on, despite the fact that some of them transcend agriculture and involve broader issues.

Foremost among the issues needing a full exchange of views are policies for U.S. international trade and U.S. macroeconomics. While there are other important issues to be considered, especially soil and water conservation, this section will only address the first two areas for the purposes of this discussion. Decisions with respect to, or changes in, these policies are integrally important to domestic farm policy. It will probably be impossible to achieve a successful domestic farm policy without accommodating policies in these other areas. In other words, they are necessary but not sufficient conditions for an efficient and vibrant agricultural economy.

Agricultural trade policy

There appears to be more and more interest in developing a more formal agricultural trade policy, one that is consistent with, and highly integrated with, our domestic farm policy. Why is this so? A closer look at the make-up of American agriculture shows just how important our foreign customers are and many are beginning to realize this fact. On the average, during the last 5 years, foreign markets purchased 35 percent of our total grain production, 50 percent of our cotton, and over 40 percent of our soybeans. In other words, American farmers have exported the production from

an average of 100 million acres of grains, soybeans and cotton per year over the past 5 years. Agricultural exports also strengthen the economy as a whole since every $1 billion in agricultural trade creates at least an additional $1 billion in U.S. economic activity. Moreover, our agricultural trade reduces our overall trade deficit by about $20 billion per year.

This administration is committed to expanding and maintaining markets for our farmers. President Reagan has taken several steps towards maintaining our markets in the face of adversity. These actions include: (1) lifting the Soviet grain embargo and negotiating a new long-term agreement (LTA) with higher minimums; (2) adopting an agricultural trade policy that promises to never have an embargo for short-supply reasons or single agriculture out and use agricultural exports for foreign policy purposes; (3) extension of record large export guarantees and support for international organizations designed to help out developing countries caught in a credit/financial crisis; and (4) initiating well-defined and targeted actions such as the Egyptian flour sale, designed to regain lost markets due to export subsidization of other nations. And there are others.

However, it's no secret that agricultural exports have declined for the third consecutive year. Apparently there are some who are concerned that if additional actions or initiatives are not taken as a part of a broader and more formalized agricultural trade policy, policies to reduce agricultural output on a permanent basis will be advanced, seriously considered, and perhaps even enacted into law.

While that thesis is a subject of contention, the following are a list of agricultural trade issues that are being more widely discussed, and perhaps will receive serious consideration by some in the future.

Bilateral trade agreements.—There are some who suggest that we should strive for more bilateral trade agreements to ensure our share of world markets. Our neighbors, the Canadians, now have about two-thirds of their grain trade under such agreements. It has generally been the administration's position to not promote a large number of bilateral agreements in the interest of free trade. However, we should also recognize that some countries insist on such agreements. Still others argue that the United States should consider in limited situations bilateral agreements in the context of the realities of the market place, recognizing that excessive use will increase market instability.

Export subsidies.—To further expand our farm markets, the administration has relentlessly negotiated for freer trade, most notably with the European Community and Japan. While these negotiations have not been entirely successful, there have been some small concessions. Many argue, however, that where our negotiations for freer trade are continuously ignored we should not be opposed to more targeting actions such as the Egyptian wheat flour sale. Others argue that more direct and comprehensive subsidies are needed. However, others feel that the best course for freeing-up world trade is to let our own actions and policy serve as a model, and that this will prove our sincerity and enhance our negotiating position in the future.

More effective GATT.—Still others suggest the United States must develop an effective forum for settling international trade disputes. They believe the first priority should be to renegotiate the General Agreement on Tariffs and Trade (GATT) subsidy code with respect to agriculture. Then a thorough review of GATT rules, regulations and procedures should be undertaken in order to determine how to strengthen the overall process and make it more effective. For example, in 1975 a complaint concerning unfair subsidization of wheat flour was submitted for review under the section 301C process established by the GATT. After 8 years of review, no conclusive action on this case has been forthcoming. Thus, there is a belief by many that GATT must be made more effective and responsive if free world trade is ever to be achieved.

Export credits.—Many importing countries currently are confronted with extraordinary debt burdens. The short term liquidity problems in international capital markets severely restrict their ability to import. Many argue that increased authority for the USDA GSM–102 export credit guarantee program will provide commercial banks with the incentive to maintain and increase import financing. They contend that making credit available will permit the import of food into these countries and, in addition, will have a positive effect by bridging the foreign exchange gap, allowing for nonfood imports vital to economic recovery. The U.S. trade deficit problem will be aided through larger exports of both food and nonfood products and through greater economic growth in importing countries. Given the financial situation that many developing and middle income countries find themselves in, it seems that this will be another issue that will receive much attention in the near future.

Other issues.—There appears to be other agricultural trade issues that several believe are of importance. They include: (1) a review of current international food aid programs concerning their purposes and effectiveness; (2) increasing our proportion of value-added exports; and (3) developing more effective market development programs.

Macroeconomic policy

Probably the most important new agenda issue concerns macroeconomic policy. Macroeconomic developments have had a tremendous impact on the economic conditions of U.S. agriculture. Recently, the United States has exported the output from two of every five acres that are planted each year. While having experienced weakness in export volume during previous periods of weak economic growth, the magnitude of the current decline is unprecedented. In the past 2 years, our net agricultural trade surplus has declined by over $8 billion as the volume of exports has dropped over 10 percent.

The causes are many, but the increased value of the dollar has had a very significant effect on exports by making our commodities much more expensive in terms of foreign countries.

Much of the increase in the value of the dollar is directly attributable to our inability to bring the budget deficit under control. As long as financial markets perceive that a crowding out of private investment must eventually occur in order to finance large Federal

deficits, there will be an expectation of higher interest rates to ration the available funds. Current long-term interest rates will obviously not drop greatly in this environment and the foreign capital and goods flow will continue into the United States and maintain the strong position of the dollar.

It should be recognized that the inherent lag in the spread of the U.S. economic recovery to our most important markets with growth potential (the lesser developed countries and the centrally planned economies) will make the agricultural trade recovery issue a persistent one over the next several years. And the strength of the dollar is likely to persist (even if some softening of interest rates takes place) due to the "safe haven" role that the dollar is playing in present foreign currency markets. That role will continue as long as a large number of countries are experiencing economic and political stability problems.

While some adjustments in capital flow restrictions in other countries, such as Japan, may provide some near term relief, it is reducing the budget deficit that should receive the highest priority to correct our current trade problems. However, the opportunity to achieve such adjustments in the Congress appears limited, leading some to suggest that a shift in the balance of budget control toward the executive branch through line item veto powers or changes in the recision process may be necessary to effectively offset the congressional perception that the electorate are not willing to accept the tradeoffs necessary to control deficits and inflation.

It is for these reasons that agriculture needs to be more involved with the debates on the deficit. Farmers are affected in too many ways to afford to sit back and not become involved. For instance, with large deficits interest rates are high which increases production costs as well as reduces domestic and international demand. Thus, appropriate monetary and fiscal policies are probably as important as the 1985 farm bill itself concerning the long-run health of the agricultural economy.

Summary

This is truly a watershed time for farm policy. Policies adopted during the next year or so will no doubt affect agriculture through the turn of the century. In the past 3 years the United States has had two bumper crops followed by the worst drought in nearly 50 years. We have also witnessed a worldwide recession that absolutely no one would have predicted 3 years ago. All of this clearly points out that farm policy must be flexible in order to be effective. It cannot and must not be structured to fit only present conditions as it has become readily apparent how quickly and drastically economic and weather conditions can change the outlook. And legislative changes in farm policy to accommodate such changes are nearly impossible to get through the Congress anymore.

In conclusion, there is need by all concerned parties to become involved in order to find the answers to the problems confronting agriculture—to help develop farm policy that is responsive to future changes in agriculture and the domestic and world economies. Agriculture is the largest and most important industry in our nation and it is imperative that we use whatever means possible to ensure it a healthy future.

In this day and age when everyone seems to be looking for new growth industries that the United States can become competitive in, such as high technology, it is ironic that we could lose the most efficient industry we have in the United States, which is agriculture, through our own doing—an industry that provides this Nation with 22 percent of its jobs, 20 percent of its GNP, and its 225 million consumers with the highest quality and most reasonably priced food and fiber supply found anywhere in the world. This paper has outlined many important issues and raised many questions that need answers. This is the challenge before all of us who are involved in agriculture.

PERSPECTIVES FROM FARMERS

FARM POLICY IN THE POST-PIK ERA

(By Robert B. Delano*)

Farm Bureau leaders believe that to develop the right policy solutions for farm and ranch problems, we must first ask the right questions and examine all of the logical answers.

Questions need to be raised about farm program effects on the long-term economic health of agriculture and on the national economy—and the proper role of Government in dealing with private farming and ranching. It is well to first consider the nature and wisdom of current farm programs.

We need to recognize that "PIK"—the payment-in-kind program, is at best, a temporary, short-term measure designed to do certain limited things.

It is not a program designed to raise farm prices this year.

Rather, PIK was designed: To reduce future Government farm program costs; to improve net farm income by reducing production expenses; and, to allow the market to operate by reducing burdensome stocks of farm commodities.

Said simply: The purpose of PIK has been to allow markets to operate so that farmers and ranchers may receive adequate income from the market—rather than from Government.

The conditions that created a need for PIK have caused Farm Bureau members and leaders to seriously ask where current farm policies have gone so wrong that an extensive production control program is necessary.

To us, it has long been obvious that current farm programs have been out of touch with market reality—that they have encouraged production completely out of line with market demand.

Farm Bureau has suggested legislation that is market oriented in dealing with basic economic farm program issues.

Few of us realized the economic pressures that would be generated as inflation was brought down almost solely by improvement in national monetary policies . . . rather than by substantial reduction in Government spending, taxation, and regulatory burden.

These economic pressures will continue as the Federal Reserve largely stands alone in its commitment to the anti-inflation battle . . . a battle, which Farm Bureau member-families strongly support.

Inflation remains agriculture's No. 1 worry.

*President, American Farm Bureau Federation.

Congress has not made essential domestic spending reductions that are necessary if inflationary expectations are to be eliminated. Instead, Federal nondefense expenditures are rising this fiscal year at a rate of 12 to 13 percent—in a time when the inflation rate is under 4 percent.

Until uncertainties about future economic policies are eliminated we will have a difficult time writing sound future farm programs, which currently are geared to the expectation of ever-higher inflation and a weak dollar.

If the country becomes committed to a long term, stable economic policy—we must take a long hard look at basic provisions of current farm programs.

If Congress becomes committed to long-term policies that reduce taxes, encourage savings and investment, allow private sector creation of more jobs and trade to produce lower inflation and higher living standards, then we must recognize that current farm programs are out of step with these overall objectives.

The need for a PIK program shows how present inflexible Federal farm programs are incapable of dealing with changing U.S. and world production, marketing, and economic conditions.

The PIK program has bought time—but it has not "bought" prosperity for agriculture. With PIK we have gained a little breathing space for a couple of years, but the real debate on farm programs has just begun.

This debate should be aimed at forcing Federal farm programs to stand or fall on their own merit.

It is natural to blame our problems in agriculture on such things as the weak world economy, or unfair trade practices and the stronger dollar, or to point to embargoes—and the recession, or to blame our present difficulties in agriculture on a long list of other factors.

Before we get entangled in these problems we must ask ourselves—"What have we done in all farm program areas in the name of helping farmers—to needlessly encourage excess production and substantially discourage consumption by our price, income, and credit programs and our policies of stockpiling commodities to support political, not market clearing prices?"

Nobel Award winning economist Milton Friedman once observed that economists do not know much, but they do know that when Government guarantees prices above the market to help producers, stocks accumulate.

Wheat, feedgrains, cotton, rice, tobacco, peanuts, and dairy are all, one way or the other, in this overproduction category. And when Government holds prices down below the market to help consumers, shortages develop.

Soybeans have been about the only crop that has had good economic health over the years. Soybeans have been closely tied to real markets—and have enjoyed continued market expansion.

It should be remembered that in 1969 the loan rate on soybeans was lowered from $2.50 to $2.25 per bushel to assure continued world market competitiveness.

The dairy industry was healthier when dairy price supports were flexible and allowed to move up and down with market demand.

Government-set prices at ever higher levels, have given efficient producers clear signals to increase production.

At the same time, equally clear signals to cut usage and to look for substitutes, have gone to those who buy U.S. farm products.

As stocks have built to burdensome levels—the message is clear. To reduce taxpayer costs and improve farm income, we must once again learn to produce for consumption, not for storage.

During the years of high inflation and inflationary expectation, when credit was cheap, farmers made major investments in technology which substantially improved yields and total output.

At the same time, exports of major commodities increased dramatically. But much of the U.S. domestic and export demand was based on inflationary, not real, economic growth.

By the end of the 1970's, inflation cut deeply into farmers' income by sharply increasing production expenses and reducing purchasing power.

As production costs increased, so did the political pressure on Congress to help farmers "keep up with inflation". These political pressures caused farm price and income supports to be raised and the farmer-held reserve to be operated without regard to market realities.

We are all familiar with the lower market prices that have resulted.

In 1979, the Federal Reserve changed its monetary policies to fight inflation. As interest rates rose, farmland values declined, and equity gains diminished as a source of annual borrowed operating capital for many producers.

As the U.S. dollar strengthened, foreign buyers made downward adjustments reflecting their reduced purchasing power.

Farm production continued to increase. U.S. farm commodity stocks grew because farm program reserve policies were designed to hold farm prices up to legislated income-support levels without regard to long-term market damage.

With inflation on a downtrend, it has become difficult for Government to maintain these higher Government-set prices in the face of budget restraints.

Farm program support and related activities have risen in cost from $2.8 billion in fiscal year 1980 to $4 billion in fiscal year 1981, and to $11.7 billion in fiscal year 1982.

And, these same farm program support and related activities will cost an estimated $20 billion or more in fiscal year 1983—almost 10 percent of the projected total 1983 deficit.

These programs have generally been viewed as an "economic safety net"—with market forces ultimately determining profit and loss—and guiding investment in additional resources.

Some would argue that the "economic safety net" has become a permanent cushion that protects farmers at the expense of the rest of the economy.

Agricultural entitlement programs with open-ended guarantees cannot escape the spending restraints that must ultimately be imposed on all entitlement programs if we are to gain control of runaway Federal spending.

PIK is the latest effort to deal with the twin problems of large stocks of major commodities and the burgeoning costs of Federal farm programs.

PIK is a voluntary program.

If it does not work, the next administrative action will most likely be some form of mandatory production controls.

PIK is not a new idea, and the circumstances of large stocks and high Government cost are not new. Similar circumstances and similar programs prevailed in the early 1960's.

What is new is that U.S. agriculture has changed dramatically. In 1960 the farm economy relied primarily on domestic markets for its output. It now depends heavily on export markets for much of its income.

Our need to remain internationally competitive must not be overlooked in writing and administering new U.S. farm programs.

Much of our loss of export market-share has been due to our diminished price competitiveness with other major exporters.

Subsidized competition generally receives a lot of blame, but USDA studies show that only about $1 billion of exports have been lost due to subsidies over the last 2 years, while yearly U.S. exports have declined by over $7 billion.

What are our choices beyond PIK?

There are two paths we can take. One leads to using our production and market advantages to the fullest extent, the other leads to shutting down the U.S. farm production plant and, eventually, to public utility status for producers.

The first option requires that future farm programs be keyed to the world market and world market prices much as Argentina did in the late 1970's when it pegged its government support prices at 80 percent of the world price for corn. As a result, Argentina's export market share stopped withering and began to grow.

To a large extent, U.S. cotton has adapted its price support program to the world market price. It is significant that cotton does not have a farmer-held reserve.

True, cotton has market difficulties and program cost problems, but in recent years cotton policies have moved generally in the right direction.

Keying U.S. farm program policy to world market prices would assure other advantages. It would require U.S. producers and farm program policymakers to pay close attention to world market prices first, rather than last, as is often the case.

This approach demands that producers work aggressively to reduce costs and to become more price competitive.

It recognizes that there is a tremendous food and fiber productive capacity in the world because of modern technology and production techniques—with more on the way.

We only need to look to the rising production of the European Economic Community to see this potential—or to consider importers' use of feedgrain substitutes when price supports and other incentives keep our prices high.

To choose the second general policy direction—in which we attempt to live with present programs and the problems they have created . . . means still more options.

We can: continue to spend $20 billion per year on a complex set of programs of stock accumulation, followed by programs of stock disposal similar to PIK, and eventually move into direct export subsidies, or, go for mandatory acreage reductions of 40 to 50 percent as we seek to maintain farm prices at levels above world market prices, or, some combination of these options.

Obviously, the domestic and international implications of these possibilities are serious.

Farm Bureau's support for a market-oriented agriculture hinges on the belief that all future farm programs must do three things:

Allow farmers to take maximum advantage of market opportunities at home and abroad without Government interference; encourage needed adjustments in resource use; and reduce the need for future Government intervention.

Present programs clearly violate these fundamental objectives.

Without basic reforms, U.S. agriculture is headed in the same direction as the common agricultural policies of the European Economic Community. These are farm policies of high guaranteed prices and with excess production siphoned into world markets through export subsidies.

Each year farm prices are decided at political sessions in Brussels—not in the marketplace—through a system that treats farmers as workers in a public utility.

U.S. farmers and ranchers refuse to be led down this path. Instead, we must move in the direction of clearer market signals to assure efficient production and increased trade.

This country has not reached its farm export limits as some now suggest.

Before we can reach our export potential—we must freeze farm program target prices and loan rates to signal our competitors that we have adjusted U.S. farm policies to the realities of changing world conditions.

With a domestic market for agricultural products that is, at best, growing only slowly, U.S. agriculture must look to export markets if we are to grow as an industry.

Other countries have also chosen to compete for these markets. The bottom line is that supplies available for export are greater than what the importers can pay for with the inflation rate down and the cost of credit up.

U.S. agriculture can grow to the extent the world economy grows and more people have money to spend on more food.

The world economy will grow only to the extent credit is available to efficient borrowers—and if markets are accessible to world trade.

Credit unwisely used to prop up bankrupt nonmarket economies is credit not available to those who have the market incentives needed to produce what the world would like to buy.

Protectionism in industrial goods and the service industries must be repelled. Without access to our markets, potential food importers will not have the hard currency they need to buy from us.

The need will continue for humanitarian food aid—which can help develop new friends and new markets—although paying customers are our only long-term hope for increased net farm income.

A sound domestic economic and monetary policy is essential if U.S. farmers and ranchers are to benefit from our comparative advantage in food production.

Rapid inflation that encourages speculative land investments does not allow the growth in productive investment that is necessary to keep U.S. agriculture modern, highly efficient and price competitive.

Taxes on petroleum products that raise the cost of producing food hurt U.S. farmers' competitive advantage, as do cargo preference rules and similar regulatory obstacles.

These include environmental actions that needlessly limit farmer access to new pesticides and restrict efficient farming practices to lessen our competitive position.

The bottom line is that U.S. agriculture must become "lean and mean" if it is to prosper in the rest of the 1980's and into the 1990's.

This will not occur if Government is allowed to constantly interfere in producer decisionmaking by inflating our cost of production while at the same time creating farm programs that price us out of the market and encourage other countries to increase production.

In 1945, professor Theodore Schultz, a noted agricultural economist at the University of Chicago, wrote a book called "Agriculture in an Unstable Economy." Schultz stressed that U.S. agriculture had to enter the export market on the supposition that we had a comparative advantage in production due to our technology.

The alternative, he said, was to attempt to solve our problems by curtailing acreage. Schultz said that problems did not lie in volume, but in price. We had to adjust to market reality since the U.S. had an important production advantage due to technology.

Unfortunately, the advice of professor Schultz was not taken. U.S. agriculture was left to wander in the wilderness of acreage reduction programs for the next 25 years, while farm income and farm numbers continued to decline.

If we choose, we can make those same mistakes again.

Farm Bureau members are determined that this will not be allowed to happen.

MANDATORY CONTROLS

(By Terry Murphy*)

Montana Farmers Union feels that Federal farm programs are vital and that such programs need to address several areas of interest in the United States. Profitability of farmers is one, obviously, because we need to keep large numbers of people on the land where they have an economic stake, rather than causing them to compete for the insufficient number of jobs available in the cities. Fairly stable prices for commodities, as well as input costs need to be a goal of the farm program. History shows that this can be accomplished without disrupting the consumer economy or requiring large outlays of Federal funds. In fact, a 1965 report by Congressman Harold Cooley showed that in the 10-year period ending in 1953 there was no net cost of farm programs to the Treasury. Those years were 100-percent parity years throughout. The economy prospered without undue inflation and the national debt was reduced. Farm profits were the key to that situation.

To export our way to prosperity without regard to price per unit is an impossibility. Our need, as farmers, and as a nation, is to produce for a known market at prices fair to both the producer and buyer. To accomplish these goals, Montana Farmers Union recommends the following general provisions which are necessary in both the short and long term:

Mandatory production controls are a must to avoid repetition of the boom and bust agricultural markets of the past 11 years. Nobody benefits from such ups and downs in the long run. Even short term, it's only speculators and traders who profit. Primary producers do much better with long-term stability.

The law must require us to be a reliable supplier to international markets. State and Defense Department orchestrated embargoes must be halted. We must produce for an existing market and long-term policy must clearly determine that either we will or we won't trade with Communist nations. If the decision is that we will trade, then it must not be interrupted for any reason short of an actual state of war involving the United States itself.

The program should provide for land retirement when necessary for either production control or conservation purposes.

Commodity Credit Corporation price support loans should be continued and improved.

*President, Montana Farmers Union.

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TWO-PRICE SYSTEM FOR WHEAT

(By Raymond B. Reichelt*)

During my farming career which began in the early thirties, I have operated under every farm program devised and found them only partially effective, complicated, and most quite costly to administer. I do, however, believe that agriculture holds a unique position in our economic system. Agriculture is the Nation's largest, most efficient industry. No industry contributes more to the general welfare of the Nation. No industry provides as much employment for the workers of the Nation. No other industry in America provides such a positive balance of payments in export/import as does agriculture. No nation on Earth is fed as cheaply as American agriculture feeds Americans. American agriculture is the world's chief source of food for the hungry.

Yet with all this, American agriculture, as a whole, is in critical economic straits. Why? I suppose one reason is its inability to tailor production to demand. While other industries operate on a cost plus pricing policy and reduce production when inventories build up, agriculture, on the other hand, is composed of so many independent operators this procedure is impossible. Also production is influenced greatly by the whims of nature, which puts production control even further out of the farm producer's reach. Another important factor is agriculture's dwindling number of voters (some 3 percent of the population), resulting in almost no political influence. Politicians tend to favor areas where the votes are and what better way to curry votes than a cheap food policy at the expense of agricultural producers.

With these thoughts in mind we must recognize and accept American agriculture's importance to the well-being of this Nation and the world. Some means must be devised to retain it in its present state of independence, effeciency, and productiveness. Surely we don't want it to evolve into another corporate conglomerate with its inherent ineffeciencies and high cost of production. I think it behooves us all to work toward a healthy and productive agriculture.

Since I am primarily a wheat producer, my comments and experience are related mostly to that product but can be equally true for other grains.

I suggest a two-price plan. Some 60 percent of our wheat production is used domestically and for that portion of our production we are entitled to a price reflecting our production costs plus a fair profit. This price I calculate should be in the $5 to $6 range. Any remaining production could be sold on the open market, which is

*Farmer, Loma, Mont.

substantially the world market. Or a producer could opt to produce or sell only for domestic use, in which case he would reduce sales to 60 percent of his historic record. Only established producers with ASCS histories would be eligible. A policy would have to be devised to handle new producers. ASCS offices have the necessary acreage histories, and either proven yields or county average yields could be used.

How would the payment of the $5 to $6 per bushel be accomplished? I suggest it be handled the same as the present deficiency payment except on only 60 percent of production. Without a loan providing a floor for the open market, I have no idea where this market might level off, but with the operation of world supply/demand and world production cost, it should level off at near present levels. This would mean about $2 per bushel due the producer on 60 percent of his historic sales. Who should pay it? Some years ago we had a program whereby the processor had to buy a certificate for the privilege of buying wheat. They, of course, raised a big fuss, claimed it would double the cost of their product and so aroused the public with false rhetoric that the program was dropped for political reasons. I think the payment should come from the Federal Treasury the same as the present deficiency payment. This way it does not effect the low-income consumer but those with the greatest ability to pay. With domestic wheat use running at about 940 million bushels per year, the cost will run about $1.8 billion, depending upon open market prices. That's a real bargain considering the many contributions made by the industry.

Once the domestic price is arrived at, it should be tied to and fluctuate with wage scales and interest rates, which in turn determine agriculture's production costs. Of course many details would have to be worked out; my estimated cost is for wheat only and other grains' cost would be added, but I think it would still be within reason.

This program should be quite simple to administer. It would leave the farmer free to produce all he wanted to for the world market, with this same market regulating production rather than the Government. This program would not stimulate world production as some other programs have and thus off-setting hoped for results. No one will know U.S. acreage for any given year before the fact.

This program should favor the retention of family-size farms, especially if provisions are made whereby base acreages cannot be built up after the effective date of the program. Base acreages should be frozen at this date and fluctuate only as domestic needs change.

Our Government would not be in the position of curtailing production in the face of a starving world.

This program should be much less costly than present or past programs and still provide a liveable income to agriculture.

AGRICULTURAL OPTIONS IN PERSPECTIVE

(By Kalo A. Hineman*)

NOTE: Some agricultural policy specialists have suggested that the trading of options on agricultural futures contracts may play a role in the marketing of certain agricultural products and have an impact on future farm policy. Mr. Kalo Hineman, a farmer and rancher from Dighton, Kans., who is a Commissioner of the Commodity Futures Trading Commission, explains agricultural options in this paper and provides a perspective on their potential role in agricultural marketing in the farm economy.

Options on domestic agricultural commodities, banned since 1936 may well begin trading during the fall of 1984, in the form of options on agricultural futures contracts.

To date, the Commodity Futures Trading Commission [CFTC], the Federal regulator of the futures market, has approved eight options based on futures contracts in gold, T-bonds, sugar, foreign currencies, and stock indices. Options on these futures contracts are part of the CFTC's 3-year options pilot program approved in September 1981. As an extension of that program, the CFTC is implementing a pilot program for the trading of agricultural commodity options.

In January 1983, President Reagan signed the Futures Trading Act of 1982, which lifted the 1936 ban on the trading of agricultural commodity options and authorized the CFTC to design and implement a pilot program for options on domestic farm commodities.

On January 16, the final regulations under which these option contracts will be traded were approved and shortly thereafter forwarded to Congress. These regulations should be effective in the spring of 1984, with the first options contracts being approved by the CFTC for exchange trading in the fall of 1984.

What do agricultural options offer?

Agricultural options are a new marketing tool that will soon be available to farmers. They have different characteristics than other marketing tools that are currently available.

Some of the advantages they offer are:

1. *Price protection,* similar to insurance, for certain agricultural producers. The farmer who purchases an option to sell his crop at a later date can lock in a futures price for his crop.

*Kalo A. Hineman is a Commissioner at the Commodity Futures Trading Commission. The views expressed in this article are those of the author and are not intended to reflect those of the Commission.

2. *Protection against a drop in price without cutting off the opportunity to benefit from a price increase.* If the market price rises, the producer who has purchased an option to sell his crop can abandon the option and take advantage of the higher market price for the crop. The cost of the option—the premium—would have to be subtracted from any potential profit.

3. *Predictable hedge costs.* If a farmer purchases an option for price protection, he knows the full cost of that protection for the life of the option; that cost is the option's premium.

4. *No margin calls for the option purchaser.* The only funds an option buyer has at risk are those put up to buy the option, or the amount of the option premium. After the option is purchased, no other payments are required during the life of the option.

5. *Price protection prior to harvest without magnifying production risks.* A producer cannot always accurately estimate the yield before harvest. However, by using options instead of, or as a complement to, a short futures position taken on the minimum yield expected, the only funds at risk are those paid for the premium. Using options in this situation, the producer can better estimate the financial cost involved in securing price protection.

On the other hand, options cannot deal with every market problem the producer faces. For instance, agricultural options could not:

1. Affect economic fundamentals, such as—
   a. increased or decreased commodity prices, or
   b. the supply of or demand for the commodity.
2. Provide multiyear price protection to participants.
3. Have any significant effect on nonparticipants in the options market.
4. Perform some of the functions of Federal price support programs.

   a. Federally established loan rates generally have acted as a price floor during the crop year. Further, price support levels have not declined from year to year in the past, thus providing basic downside price protection to the agricultural sector. Options will not offer this kind of downside price protection to the agricultural markets. Options can offer price protection to the individual producer only at price levels that can be achieved in the marketplace.

   b. Trading in options will not withhold grain from the market. However, if a producer takes out a Commodity Credit Corporation loan with his crop as collateral, the crop cannot be sold and so is withheld from the marketplace.

   c. Price support programs often have mandatory acreage reduction features as a requirement for producer eligibility for program benefits, and therefore, have reduced the supply of the commodity produced. Options have no such supply control function on the marketplace.

How do agricultural options work?

An option gives you the right to buy or sell a commodity (in this case, a futures position). There are two basic types of options—a

call option—the right to buy the commodity later and a put option—the right to sell the commodity later.[1]

The owner of the option has the right to buy or sell the commodity (the underlying futures contracts) at a fixed price (the strike price) before the option expires (on the expiration date).

Since there is no such thing as a free lunch—purchasing an option costs something, and the cost of buying an option is the premium.

If a producer wanted buy an option to put a price floor under his crop, he could do so by purchasing a put option. For instance, the July 1984 soybean futures contract is trading at $7.60 a bushel. A soybean producer could buy a put option (the option to sell beans) with a strike price of $7.60 giving him the option to take possession of one short futures contract (5,000 bushels) at $7.60 per bushel until the option expires in, let's say, June 1984. This coming year the farmer expects the price of beans to be higher than $7.60, but determines he cannot accept anything lower if he is to cover his production costs. Therefore, he decides to put a price floor of $7.60 under the crop. In order to do this, he buys a put option.

The farmer purchases the option from his broker who in turn places the order to buy the put option on the floor of the exchange. Let's assume in this instance the other side of the trade, or the grantor of the option, is a grain warehouseman. The grantor, or warehouseman in this instance, assumes the risk of a price decrease and in return receives the premium from the option buyer.

Now, the cost of that option, or the option premium, is estimated to be approximately 5 to 15 percent of the value of the soybeans, in this instance it is estimated at about 40 cents a bushel. The price of options (option premiums) will be determined in the marketplace. There are a number of factors that will affect the price of options, the most important ones being the length of time until the option contract expires, market volatility, and supply and demand.

All options contracts are defined by five specifications. In this case, the specifications are:

1. Type of option: Put (option to sell).
2. Strike price: $7.60.
3. Expiration date: June 31, 1984.
4. Premium: Approximately 40 cents/bushel.
5. Underlying futures contract: July 1984 CBT soybeans.

Suppose that by June 30, the cash market price of beans rises above $7.60 to $8.20 per bushel. The producer wants to take advantage of the price rise; therefore, he abandons the option and sells his beans in the cash market. In this case the farmer has lost the 40 cents per bushel premium but has gained 60 cents per bushel for the beans in the cash market, for a net gain of 20 cents per bushel. Meanwhile, the warehouse gained $2,000 (40 cents per bushel times 5,000 bushels) for granting the option to the farmer.

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[1] Options on agricultural commodities will be based on futures contracts. Therefore, the owner of an option will have the right to take possession of a long (buy) futures position if he is holding a call option or a short (sell) futures position if he is holding a put option, at the strike price stipulated in the option contract. If the owner of the option contract exercises the option, he can (1) trade out of the futures position he acquired or (2) take delivery of the physical commodity through the futures market. In most cases the option holder will probably choose to trade out of his option position and not exercise the option into the futures market.

If the price of beans has dropped below $7.60, the farmer most probably could have used his option to sell his beans for $7.60 a bushel, taking advantage of the price floor he established. The warehouse, in this case, would have gained $2,000 from the option premium, but would have been obligated to deliver a short futures contract to the producer, bearing the opportunity loss (cost) in the futures transaction. Then the producer would most likely offset that futures position taking the gains made in the futures market and then sell his crop in the cash market.

Basic option terms

Call option—a contract which gives the purchaser the right, but not the obligation to purchase a given amount of a commodity at a fixed price (the strike price) until a specified date in the future (the expiration date).

Put option—a contract which gives the purchaser the right, but not the obligation, to sell a given amount of a commodity at a fixed price (the strike price) until a specified date in the future (the expiration date).

Option grantor—one who sells an option contract and must stand ready to perform his obligations under the contract if the option purchaser exercises the option.

Strike or exercise price—the fixed price at which the option purchaser may buy (call) or sell (put) the commodity.

Option premium—the market value of the option. In effect, the cost of the price insurance.

Expiration date—the date upon which the rights of the option purchaser expire.

PERSPECTIVES FROM ECONOMISTS

EXCESS FARM SUPPLY: PERMANENT OR TRANSITORY?

(By Luther Tweeten*)

Dealing effectively with economic ills of agriculture requires an understanding of their sources. That understanding is the purpose of this paper. Emphasis is on supply, but it is impossible to trace price and income trajectories without also acknowledging the role of demand.

Answers are sought to the following questions:

1. What were the major sources of the 1980's farm recession?
2. What is the extent of current farm resource and output oversupply?
3. What are trends in farm supply, demand, and prices to year 2000?
4. What will be the principal economic problems faced by farmers in the next two decades?
5. What is needed to restore economic vitality to the farming industry?

SOURCES OF THE 1980'S FARM RECESSION

The current farm recession began in 1980. The parity ratio (1910–14=100) fell from 71 in 1979 to 64 in 1980, 61 in 1981 and 57 in 1982. Meanwhile, net farm income fell from $32 billion in 1979 to $20 billion in 1980 and 1982 and $25 billion in 1981.

The economic downturn traces to farm output supply and demand. Demand, measured here by growth in domestic population, real income per capita and exports, varies widely from year to year mainly because of the high and growing share of volatile exports in total demand (see table 1 and appendix table 1).

In the 1950's supply increased faster than demand and generated excess capacity which carried into the 1960's (see table 1). This excess capacity was sufficient to require considerable commodity supply control even though supply increased at approximately the same rate as demand during the 1960's. In the 1970's demand increased faster than supply and, as expected, economic conditions improved for the farming industry as a whole. Whether measured

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by adjusted or unadjusted exports (see appendix table 1), the annual rate of increase in demand averaged 2 percent from 1971 to 1982.

TABLE 1.—ESTIMATED ANNUAL PERCENTAGE INCREASE IN REAL DEMAND, SUPPLY AND EXCESS DEMAND FOR U.S. FARM OUTPUT, 1949–82

[In percent]

Years or decade	Average annual increase in:		
	Demand [1] (unadjusted)	Supply [2] (productivity)	Excess demand
1949–59	1.9	2.1	−0.2
1959–69	1.9	1.8	.1
1969–79	2.7	1.9	.8
1979–80	4.0	−5.7	9.7
1980–81	.3	12.0	−11.7
1981–82	−.7	1.8	−2.5

[1] See appendix table 1.
[2] Data from Council of Economic Advisers, p. 270.

Depressed farm economic conditions had quite different origins in each of the 3 years of the 1980's. Between 1979 and 1980, unadjusted demand increased 4 percent and productivity declined nearly 6 percent for a substantial 10 percent excess demand (table 1). How could the farm recession begin in early 1980 despite the highly favorable real demand-supply balance? The downturn was caused partly by negative psychology induced by the export embargo to the Soviets early in 1980 and by convergence of the hog and cattle cycles at high output. But it was caused mostly by the cost-price squeeze induced by national inflation (the GNP deflator increased 9 percent) which on the average shows up more quickly and fully in prices paid by farmers (prices for production items of nonfarm origin increased 16 percent) than in prices received by farmers which increased only slightly (Tweeten 1982, p. 2). The situation was very different between 1980 and 1981 when demand increased modestly but productivity due to weather surged, creating a large excess supply of 12 percent (table 1). Between 1981 and 1982 productivity remained high and advanced supply at a somewhat normal rate but demand dropped, creating 2.5 percent excess supply.

The cost-price squeeze generated by inflation in the expansion phase of the business cycle in 1980 should have worked in reverse in the general recession of 1981–82 by dampening interest rates and prices paid by farmers. But a restrictive monetary policy coupled with an expansionary fiscal policy (deficit spending) helped create high real interest rates, an over-valued dollar in international markets, and a depressed U.S. and world economy. The delayed effect of using food as a political weapon in 1980 and 1981 also slowed U.S. farm exports in 1982.[1] These sources of retarded export

[1] The Soviet grain embargo had comparatively little impact in 1980 on U.S. prices because world grain supplies were short—what we did not sell to the Soviets we could sell to other markets vacated by the Argentines and other exporters who filled the Soviet market. In 1982 with excess grain supplies, our role of residual supplier meant far fewer grain sales because the exporters who took over Soviet markets could also supply their former markets. For example, if

Continued

demand can be expected to persist until the world makes a significant economic recovery.

In short, the major causes of the U.S. farm recession in the past 3 years were national inflation and the attendant cost-price squeeze in 1980, usually high crop yields and attendant oversupply in 1981, and lagging demand caused by worldwide recession and overvalued dollar in 1982.

EXTENT OF THE CURRENT OVERSUPPLY

According to historical experience, each of the 83 million diverted acres in 1983 will reduce harvest by 0.7 acres and would have yielded three-fourths as much as acres actually harvested (Tweeten 1979, p. 484). Thus the diversions which account for one-fourth of crop acres will reduce overall output by only about 10 percent. Adding exports assisted by Federal programs brings Government diversion to 11 percent of output.

Current excess capacity in agriculture is of two types: stocks and flows. Approximately 3 percentage points of the estimated 11 percent diversion is designed to reduce excessive carry-in stocks from previous years; and another year of diversion including payment-in-kind may be required to reduce carryout stocks to more normal levels such as 1 billion tons of feed grains.

The remaining 8 percent points of "flow" excess capacity under early 1983 expectations are not permanent. A balance sheet of factors involved in dissipating that excess capacity must consider the "one shot" impact of normal weather, world economic recovery, normal value of the dollar and farm input response to price.

Weather

As noted earlier, farm productivity increased substantially from 1980 to 1982. The index of productivity (farm output per unit of aggregate production input) was as follows: 1980=100; 1981=112; 1982=114.

Unless technology can be separated from weather in this productivity index, it is impossible to determine excess capacity and whether productivity was (1) normal in the 1970's but abnormally high in 1981 and 1982, or (2) was unusually low in the 1970's and normal in 1981 and 1982.

Such separation was made using statistical procedures with results shown in table 2 (see appendix A). Data indicate that weather was slightly below normal in the mid-1970's but better than normal in 1981 and 1982. Aggregate weather or environment as measured by the "all output" series in table 2 was 4–5 percent above normal in 1981 and 1982 while weather for grains was even more favorable. It is clear that unusually favorable weather can account for most of the stock accumulation in 1981 and 1982. A return to normal weather would be expected to reduce production about 4–5 percent, other things equal, but still leave agriculture with 4 percent excess capacity mainly because of weak demand.

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the U.S. would have had the same share (61 percent) of the Soviet wheat market in 1982/83 as in 1972/73, exports of wheat would have been 300 million bushels more in 1982/83 for a price gain of 30 cents or more per bushel.

TABLE 2. —ESTIMATED WEATHER AFFECT ON VARIOUS CROP YIELDS AND AGGREGATE FARM PRODUCTIVITY [1]

[Percent of normal]

Year	Wheat	Feed grains	All crops	All output
1970	98.5	88.2	95.4	96.3
1971	107.9	106.5	102.7	102.3
1972	99.4	105.1	103.5	100.8
1973	102.2	102.6	103.0	100.2
1974	92.3	80.6	90.2	93.4
1975	104.1	95.7	97.0	101.1
1976	98.2	95.5	93.4	97.5
1977	95.4	98.4	98.1	99.0
1978	88.4	106.0	100.9	99.4
1979	98.8	108.3	107.3	101.7
1980	99.4	89.9	92.6	94.6
1981	107.5	109.5	104.6	104.4
1982	107.3	109.9	107.5	104.7

[1] Estimates are ratios of actual to predicted values from the "best" (equation 4) of the functional forms in appendix A. Data were from 1950 to 1982.

Farm input volume

Are too many resources committed to farming? Real supply and real demand curves moved to the right by the same percentages from 1971 to 1982. The implication is that real farm prices would be the same in each of the 2 years if all other things were equal—including the level of farm production resources.

But other things were not equal and the parity ratio (unadjusted for direct payments) fell from 70 in 1971 to 57 in 1982. Highly favorable prices in the early to mid-1970's caused aggregate input volume to increase by 6 percent from 1971 to 1979. The input volume dropped 2 percent from 1979 to 1982. But the 4 percent net addition to production input volume from 1971 to 1982 accounts for a goodly share of the 17 percent lower real prices in the latter compared to the former year. If farm prices average around 55–60 percent of 1910–14 parity which later analysis suggests is normal, it is not unreasonable to expect at least 1 percentage point further reduction in input volume. Unlike the 1950's and 1960's when up to 40 percent of farm labor was in excess supply and could only slowly make adjustments, the current excess input volume is primarily capital acquired in the 1970's and is more readily adjusted out of production.

Other elements and balance sheet

World economic recovery will add at least 1 percentage point "one shot" to demand. A more normal value of the dollar in international exchange may add another 2 percentage points.

Based on the foregoing analysis, the balance sheet of excess capacity expressed as a percent of normal output at 55–60 percent of parity is summarized as follows:

Percent of normal output

+11	Government diversion in 1983.
− 3	Less excess stocks from previous years reduced by PIK. (Two percentage points of excess stocks remain to be removed in subsequent years.)

= 8	Flow excess capacity under early 1983 expectations.
− 4	Less reduction of output with normal weather in 1983.
= 4	Flow excess capacity with normal weather.
− 1	Less increased demand with world economic recovery.
− 2	Less increased demand with normal value of dollar.
− 1	Less reduction of output with reduced production inputs in response to lower prices.
= 0	Remaining excess capacity.

Some of the factors such as favorable weather in 1981 and 1982 that required the 11 percent diversion in 1983 are transitory. But other factors though less than permanent are certainly more than transitory. Not all factors obviating the need for diversion programs will turn around quickly—an example is the benefits of world economic recovery which may not be felt until 1985. Even with reasoned economic policies we may have to await the last half of the 1980's before excess capacity is eliminated, farm economic vitality returned and the high Government budget and supply control profile diminished or eliminated.

Tradeoffs must be recognized in the above balance sheet. A weather cycle of continued good weather could continue excess capacity and require more diversions or lower farm prices. Unfavorable worldwide weather coupled with rapid economic recovery could quickly eliminate the need for Government diversions. And high Government price supports, even if coupled with normal weather and worldwide economic recovery, would prolong problems of excess farm capacity and high Government costs.

If all factors listed in the above balance sheet acted to eliminate excess capacity by 1985, would that temporary equilibrium give way to chronic excess or shortage to year 2000? Will supply outrun demand and create persistent excess capacity in the long run? Or will demand advance more rapidly than supply to bring markedly higher real prices to farmers? No one has precise answers to these questions but analysis can provide some insights.

SHORT- AND LONG-TERM TRENDS IN FUTURE DEMAND AND SUPPLY

The equations used to estimate weather effects in table 2 and discussed in appendix A are here utilized to project trends in technology over time. The two equations with the highest adjusted R^2s predicting aggregate productivity for the farming industry were as follows:

$$\text{(a)}\quad \ln TE = \underset{(.39)}{4.18} - \underset{(.0681)}{.1720}\ \ln H + \underset{(.0005)}{.0187}\ T \qquad R^2 = .979,\ DWd = 2.09$$

$$\text{(b)}\quad \ln TE = \underset{(.4020)}{-.5066} - \underset{(.0665)}{.0233}\ \ln H + \underset{(.03)}{1.21}\ \ln T. \qquad R^2 = .980,\ DWd = 2.05$$

TE is the predicted current year productivity index (1977=100), H is million current harvested acres, T is time (last two digits of current year) and ln refers to natural logarithms. The equations were estimated by ordinary least squares with annual data from 1950 to 1982. Standard errors are in parenthesis. (Additional explanation is given in appendix A.)

The specification in equation (a) gives a constant rate of increase in technology of 1.87 percent per year. There is little objective basis to prefer one over the other specification. According to equation (b), slightly preferred over (a) based on R^2, t value, Durbin-Watson d statistic and previous analysis, the rate of increase in technology (1.21/T) for 1950 is 2.4 percent and for year 2000 is 1.2 percent (table 3). If the projected annual rate of technological improvement of 1.87 percent from equation (a) is averaged with the 1.2 percent rate from equation (b), the result is a predicted rate of 1.5 percent for year 2000.

No evidence of yield plateaus is apparent for any major farm crop or aggregate output in table 3. Even with declining percentage gains over time for aggregate productivity, the absolute gain in output increases each year due to technology.

Will demand keep pace with this rate of gain in supply? Averaged over the remainder of the 1980's, it seems reasonable to expect a 0.8 percent annual increase in domestic population, a 2 percent annual increase in domestic real income per person and 3 percent annual increase in exports. If 27 percent of farm output is exported, this translates into an annual increase in total demand of 1.5 percent, the same as the increase in real supply predicted by equation (b) for 1980. Annual export gains of 3 percent are modest indeed compared to the average increase of 8 percent per year in the 1970's.

TABLE 3.—ANNUAL RATE OF INCREASE IN VARIOUS CROP AND LIVESTOCK YIELDS AND AGGREGATE FARM PRODUCTIVITY DUE TO TECHNOLOGY ESTIMATED FOR 1950–80 AND PROJECTED TO 1990 AND 2000

[Annual percentage rate of yield increase]

Year	Wheat	Feed grains	All crops	All livestock	All output
1. Estimated from equation 4, appendix A:					
1956	3.33	4.14	2.68	1.70	2.42
1960	2.78	3.45	2.23	1.41	2.02
1970	2.38	2.96	1.91	1.21	1.73
1980	2.08	2.59	1.67	1.06	1.51
1990	1.85	2.30	1.49	.94	1.35
2000	1.67	2.07	1.34	.85	1.21
Adjusted R^2	.890	.958	.954	.971	.978
2. Estimated from equation 3, appendix A:					
Annual rate of increase, 1950–2000	2.60	3.06	2.07	1.28	1.87
Adjusted R^2	.887	.960	.956	.959	.977

In an earlier study (Tweeten, forthcoming) I projected annual domestic population and income growth averaging 0.75 and 2 percent respectively and export growth averaging 3 percent annually for the 1982–2000 period. This resulted in an average gain of 1.6 percent per year in total farm putput demand for 1982–2000. Other estimates in table 4 predict growth rates of 1.3 to 2.7 percent annually for the same period.

Fairly high rates of overall demand growth are possible with rather modest export demand growth by year 2000 because export demand will comprise a much larger share of overall demand. Thus if annual exports expand 4 percent, population 0.5 percent and per capita real income 2 percent, total demand grows by 2 percent in year 2000. The evidence tilts slightly toward demand advancing faster than supply to year 2000 and beyond based on data in tables 3 and 4. However, exciting new emerging technologies such as genetic engineering and bioregulators discussed by agricultural scientists at a recent Resource Conservation Act Symposium (see Tweeten, forthcoming) provide optimistic future portents—especially for livestock productivity gains which in the past have lagged crops. However, realization of potential supply response depends heavily on adequate funding of basic and applied agricultural research as well as extension.

In conclusion, any projection is hazardous but the best guess is that supply and demand are likely to increase at somewhat comparable rates from 1982 to 2000. As I stated elsewhere:

The future is unlikely to be dominated either by chronic surplus or shortage of food and fiber. Rather, periods of acute food crisis and acute farm income crisis will appear sporatically to year 2000 and beyond (Tweeten, forthcoming).

TABLE 4.—PROJECTED INCREASES IN DEMAND AND SUPPLY FOR FARM OUTPUT FROM 1982 TO 2000

Source	Demand	Domestic		Supply (productivity)
		Exports	Total	
RCA-USDA: [1]				
Quantity, year 2000 as percent of 1982	117	151	127	122
(Annual increase, percent)	(.9)	(2.3)	(1.3)	(1.1)
Tweenten: [2]				
Quantity, year 2000 as percent of 1982	117	170	132	131
(Annual increase, percent)	(.9)	(3.0)	(1.6)	(1.5)
RFF, EEC constant: [3]				
Quantity, year 2000 as percent of 1982	115	164	135	.....
(Annual increase, percent)	(.8)	(2.8)	(1.7)	.....
RFF, EEC liberalized: [4]				
Quantity, year 2000 as percent of 1982	115	210	151	.....
(Annual increase, percent)	(.8)	(4.2)	(2.3)	.....
NALS-USDA: [5]				
Quantity, year 2000 as percent of 1982	118	259	161	.....
(Annual increase, percent)	(.9)	(5.4)	(2.7)	.....

[1] Resource Conservation Act "moderate" estiamtes, see Tweenten (forthcoming).
[2] See Tweenten (forthcoming).
[3] Resources for the future projection for crops with continuation of current EEC policies as reported in Scoville. My adding of domestic and export components gave total demand index of 129 in year 2000 for a 1.4 percent annual increase rather than the reported index of 135.
[4] Same as footnote 3 except my adding of domestic and export components gave total demand of 141 and 1.9 percent compared to the reported demand of 151 in year 2000.
[5] From National Agricultural Lands Study, p. 56.

FARMING EFFICIENCY AND PRICES REQUIRED TO COVER ALL COSTS OF FARMING

We now turn to the question of prices likely to prevail on the average to year 2000. If supply and demand for farm output expand at somewhat comparable rates in the future, farm prices may average near the cost of production on efficient farming units. Efficient farmers bid up land prices until less efficient farmers are earning low returns (valuing land and other resources at opportunity cost) whatever the parity ratio given time for prices of land resources to adjust. We can derive some clues to average prices likely to prevail in the future by observing total resource costs of production on efficient farms of today.

The 112,000 farms with annual sales of $200,000 or over in 1981 accounted for less than 5 percent of all farms but for half of all farm output (table 5). It may be noted in rows 1c and 1d of table 5 that large farms accounted for a greater percent of total U.S. farm output than of inputs whereas small farms accounted for a greater proportion of inputs than of output. Output includes all receipts from crops and livestock, the value of products produced and consumed on the farm, and Government payments.

TABLE 5.—UNIT COSTS, EFFICIENCY, AND PARITY PRICE REQUIREMENTS BY ECONOMIC CLASS OF FARMS, UNITED STATES, 1981

Item	Economic class, by farm sales							All farms
	Less than $5,000	$5,000–$9,999	$10,000–$19,999	$20,000–$39,999	$40,000–$99,999	$100,000–$199,999	$200,000 and over	
1. Structure components:								
a. Number of farms (thousands)	843	335	286	278	396	186	112	2,436
b. Percent of all farms	34.6	13.8	11.7	11.4	16.3	7.6	4.6	100.0
c. Percent of all output	1.6	2.0	3.2	6.2	19.0	19.0	49.0	100.0
d. Percent of all input	6.4	3.9	4.8	7.7	21.1	19.3	36.8	100.0
2. Efficiency measures under 3b assumptions:								
a. Output/input (dollars)	.19	.38	.51	.60	.68	.74	1.00	.75
b. Input/output (dollars)	5.17	2.63	1.96	1.67	1.48	1.35	1.00	1.33
c. Output from 1981 input used with respective farm class efficiency (billions of dollars)	34.7	69.4	93.1	109.5	124.2	135.1	182.6	136.9
d. Input required to produce 1981 output with respective farm class efficiency (billions of dollars)	797.6	405.8	302.4	257.6	228.3	208.3	154.3	205.2
e. Number of farms required to produce 1981 output with respective farm class (thousands)	51,467	17,063	8,848	4,510	2,086	977	229	2,436
3. Parity ratio (1910–14=100) required to cover all costs:								
a. Short-term debt 15 percent, long term 10 percent, equity 8 percent	368	189	145	123	102	87	62	84
b. Short-term debt 8 percent, long term 5 percent, equity 5 percent	281	143	106	90	80	73	54	72
c. Same as (b) but uniform 6 percent labor-management input share	203	116	93	82	75	72	54	68

Source: USDA, August 1982, p. 74; Tweeten and Huffman, p. 53.

Inputs include not only production expenses but also a return to operator and family labor valued at the hired labor wage rate and an operator management cost equal to 5 percent of net receipts. Durable capital inputs are measured by the real interest and depreciation costs necessary to maintain their flow of services. The real interest rate for durable capital is the nominal interest rate

less capital gains. Thus one procedure would be to charge the current nominal rate of interest on all capital and subtract out capital gains. An alternative procedure used here is to cost capital at an assumed real rate of interest. In the efficiency measures in panel 2 of table 5, short-term debt is costed at an assumed real rate of 8 percent compared to the 15 percent nominal average rate actually paid in 1981. The long-term debt is costed at a real interest rate of 5 percent compared to the 10 percent nominal average rate actually paid. Equity capital cost is assumed to be 5 percent of value.

The output-input ratio which is in essence a production function for agriculture indicates that on the average small farms produce at only 20 percent of the efficiency of large farms when all resources are valued at opportunity cost (panel 2, table 5). The input-output ratio (the marginal cost among farm size classes and average cost within class and found by dividing total cost by total returns for each economic class) indicates substantial economies of size as evident in the decline in unit cost in comparing smaller with larger farms.

If the aggregate actual 1981 input volume would have been used only on farms with the size and efficiency of those with sales of $20,000 to $39,999 in 1981, only $110 billion of output would have been produced compared to actual output of $154 billion (row 2c, table 5). If aggregate actual 1981 output volume would have been produced with the efficiency of farms in size class $20,000–$39,999, $258 billion of input would have been required compared with actual input of $183 billion. And 229,000 farms would have been required to produce the entire 1981 output with farms with the size and efficiency of those with sales of $200,000 and over compared to the actual 2.4 million farms in 1981. Such restructuring of the farming industry would have massive impact on many rural communities with an agricultural base but would have less impact on rural areas as a whole.[2]

Small farms required 281 percent of parity (1910–14=100) to cover all costs in 1981 whereas the largest farms required only 54 percent of parity to cover all costs (row 3b, table 5 and figure 1). The average unit of farm output cost 72 percent of parity to produce in 1981 compared with an actual parity ratio of 61, hence farms on the average lost money. On large farms, receipts covered all resource costs on the average. Of course, many individual large farms lost money.

[2] In 1980, less than one-tenth of nonmetropolitan area residents and employment is directly involved in farming. Directly and indirectly, farming accounts for 15–20 percent of the economic base of nonmetropolitan areas.

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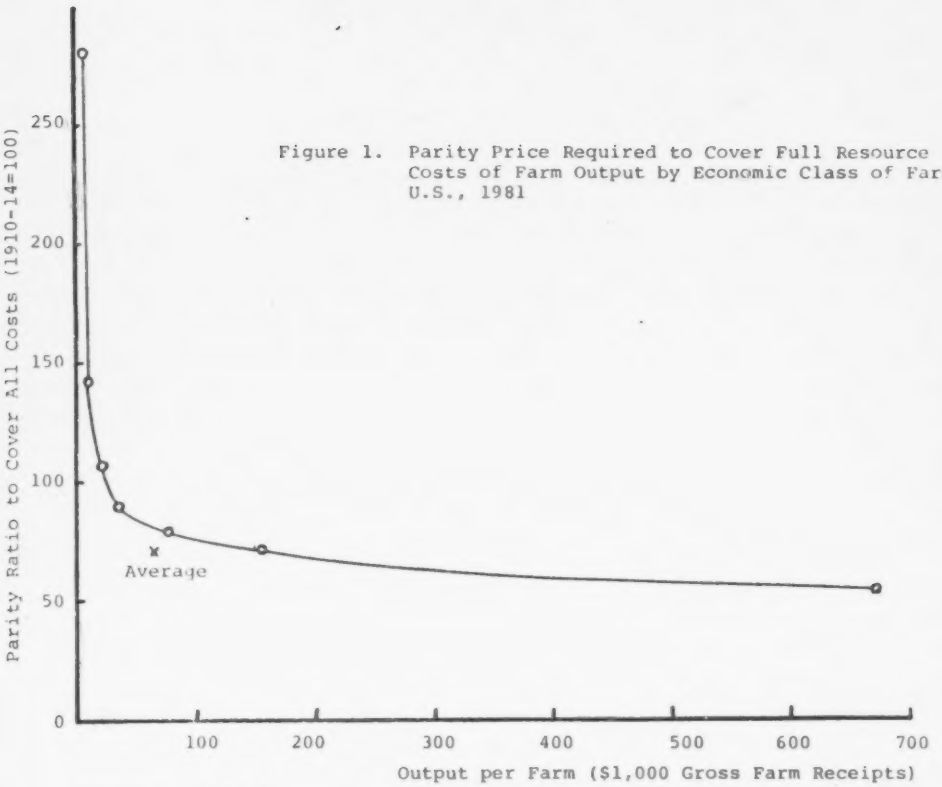

Figure 1. Parity Price Required to Cover Full Resource Costs of Farm Output by Economic Class of Farms, U.S., 1981

Source: Table 5.

In row 3b of table 5, the labor-management share of total farm inputs ranged from 32 percent on small farms to 6 percent on the largest farms.[3] Alternatively assuming that labor-management costs averaged only 6 percent of all costs on all sizes of farms in 1981, the parity ratio required to cover all costs is shown in column 3c in table 5. Still, over 200 percent of parity is required to cover expenses on small farms with resources valued at opportunity costs. If considerably higher interest rates are assumed (row 3a), the parity ratio required on average size farms was 84 percent and on large farms was 62 percent.

The pattern for 1981 is similar to 1960, 1960 and 1970 results which I have published earlier but cost differences are greater between large and small farms (see Tweeten 1979, p. 185 for 1970 estimates). However, it must be cautioned that table 5 and figure 1 data are for 1 year only and must be reinforced by other estimates before being viewed as definitive. The data do have the advantage of being measures of actual economies of size in the real world rather than engineering studies of "what ought to be" or "what could be" (see Miller et al.).[4]

[3] Labor-management cost was the most crudely estimated expense and was assumed to be 32, 24, 18, 15, 12, 8 and 6 percent of all input costs respectively from small to large farms in table 5 based on earlier estimates by Hottel and Reinsel for 1970 updated by trends in labor inputs to 1981.

[4] Results in table 5 for presumed reliance on only small farms for all output are not very meaningful because resources and families willing to subsidize farming would run short; results

Continued

SUMMARY AND CONCLUSIONS

Simple extension of current economic moods into the future is a widespread but inappropriate projection. In 1966–67 and again in 1973–74, many including "experts" were saying that the world food demand henceforth would outpace supply and that farmers would not again face crop surpluses or low prices. In the excess supply period 1933–41, 1953–65 and currently the tendency is to expect surpluses to persist. But permanent surplus is a no more realistic projection today than was permanent shortage 1973–74.

Economic crises of surplus or shortage are difficult to predict in part because they have multiple origins. For example, the crisis of short food supplies in 1973–74 traced to such disparate sources as unfavorable crop weather in the United States and U.S.S.R., a low point in the U.S. cattle cycle and low anchovy catch off the coast of Peru. The current economic crisis began out of multiple causes—unfavorable monetary-fiscal policy, unusually favorable weather, weak world economy, and peak output in the hog and cattle cycles.

The current economic crisis in agriculture is simply another of the recurring series of economic setbacks that have plagued agriculture since its very origins. Future crises of abundance and shortage will occur, but it is impossible to predict when because of the compound sources of economic setbacks and the role of unpredictable political action and weather in the process. The most likely U.S. agriculture scenario in the next two decades is for real farm prices and supply-demand ratios to show no strong upward or downward trend but to fluctuate considerably around a somewhat flat trajectory.

Excess capacity and adjusted requirements

The estimated current excess resource capacity, a residual from high prices in the mid-1970's, represents fewer adjustment problems than did resources in the 1960's. Then labor was in excess by up to 40 percent; currently the excess is mostly in capital resources that can be reduced in a comparatively short time although 2 or 3 years of farm prices in the 55–60 percent of parity range may be required. Much of the excess resources may be in the midsize farm classes.

Indications are that the 61 percent of parity prices experienced in 1981 may not be abnormal but may be sufficient to induce output in line with demand and provide returns that cover all costs on adequately sized and managed farms in the 1980's. Operators of the smallest units that accounted for over 70 percent of all farms received negative net farm returns in 1981. But off-farm income was sufficient to offset farm losses and provide a reasonably adequate total income (see U.S. Department of Agriculture, 1982, p. 98). The importance of off-farm income in 1981 is illustrated by the fact that, although aggregate-real net farm income was the second lowest since 1933, personal disposable income per capita of all farm people averaged 88 percent that of nonfarmers!

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for reliance solely on the very largest farms are not very meaningful because no farms would be around to produce the intermediate inputs such as livestock feed large farms now purchase from other farms.

Farmers now have considerable mobility and comparatively few are trapped in chronic low-return operations by inertia and lack of knowledge. Most small farms that appear inefficient in table 5 when all inputs are paid opportunity costs probably are not "privately" inefficient when the consumption value of the farm way of life, tax savings and other benefits of residing on small units are accounted for. That is, part-time small farmers pay for their farming out of nonfarm income much as they would pay for a sports car or yacht.

The incidence of hardships is especially high on the midsize full-time farms which incur farm income losses without offsetting income from off-farm employment. These farmers face difficult times to year 2000. Because of their unique circumstances, they will provide a principal source of political pressure for commodity price supports. Price supports set high enough to maintain the economic viability of these farms may induce overproduction, require large acreage diversion programs, entail sizable Treasury outlays for commodity programs, and unduly inflate land prices by bringing windfall gains to efficiently sized and managed farms.

Parity farm prices

Prices necessary to cover all costs of production on efficiently sized farms have declined substantially since my estimate (Tweeten 1979, p. 174) of approximately 75 percent of parity (1910–14=100) required for 1970. Data in table 5 are subject to error, do not apply to every commodity and must be interpreted with caution, but the shift in production and market economies toward larger farms since 1970 is consistent with trends in overall productivity. During the 1970–81 period overall farm production efficiency increased 29 percent based on U.S. Department of Agriculture (1983) productivity estimates while the parity ratio required to cover all costs on large farms decreased 27 percent according to results in table 5. This result is consistent with economic theory (Tweeten 1979, pp. 165–66).

Farms that account for half of farm output now cover all resource costs with prices 54–62 percent of parity. With demand and supply expected to increase at roughly comparable rates on the average to year 2000, farm prices will tend to gravitate to the cost of production on these efficient farms. Because these farms will set land prices for all, less efficient farms will lose money even owning land with full equity if all their resources are valued at opportunity costs. If a higher parity price ratio is maintained by Government programs, land values will be bid up so that the same pattern of losses on smaller farms will prevail.

Farm problems

The principal economic problem of the farming industry in the next two decades will be the same as that of the previous four decades—instability. On the average, farming returns are likely to cover all costs as they did in the previous four decades, but periods of losses will alternate with periods of profit. The problem will be exacerbated by huge assets required for an economic unit, life cycle financing problems of family farms, high cash costs which cannot be deferred or absorbed, and by the increasing proportion of vola-

tile exports in total demand. Repeated intrusion of U.S. foreign policy into farm exports has dampened exports and made the United States a residual food exporter. The challenge of keeping export markets open and free of political manipulation will be chronic.

A second major continuing farm problem will be cash flow and other difficulties stemming from inappropriate monetary-fiscal policy (Tweeten, June 1981 and November 1981). A tight Federal monetary policy depresses short-run demand at home and abroad but reduces inflation and farm cash-flow problems. A loose Federal fiscal policy of large current and planned post-recession Federal deficits crowds out private investment and drives up short-term interest rates. Investors' fears that the Federal Reserve Bank will be unable to restrain the money supply in the face of high Federal deficits adds a significant inflation premium to long-term interest rates. High nominal interest rates coupled with low inflation means high real interest rates which attract foreign investment, drive up the value of the dollar in foreign markets and depress U.S. farm exports. A Federal budget out of control will extend the duration of high real interest rates, retard economic recovery and perpetuate excess capacity in agriculture.

Some problems will be peculiar to certain segments of the farming industry. One is extension of efficient farm size to larger operations, placing many traditional midsize family farms in the less efficient size categories. Adjustments will be especially painful because many such farms have traditionally been the backbone of agriculture, farm organizations and the rural community.

Conditions to restore vitality

Restoration of economic vigor to the farming economy will require three principal conditions:

1. A growing U.S. and world economy without high inflation. The United States working with other nations to promote international free trade, sound domestic monetary-fiscal policy and international financial stability will hasten recovery and sustain progress.
2. Decisive action to reduce U.S. grain carryover stocks. One more year of payment-in-kind may be required.
3. No better than normal weather.

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Appendix A

Functional forms utilized to estimate weather and technology effects were:

(1) $Y = a + bA + cT$.
(2) $Y = a + bA + cT + d\,T$.
(3) $\ln Y = \ln a + b \ln A + cT$.
(4) $\ln Y = \ln a + b \ln A + c \ln T$.

where Y is yield per planted acre and A is planted acres in year t in the case of wheat and feed grains. Y is index of crop production per acre and A is harvested crop acres in the case of all crops, and Y is aggregate farm output per production input and A is harvested crop acres in the case of "all output".

Crop yields and output per unit of production inputs were regressed on acres planted (acres harvested in the case of aggregate crop yield and aggregate productivity), lagged ratios of crop prices (crop and livestock prices in the case of aggregate productivity) to prices paid by farmers, diverted acres and time. These variables were included to separate the impacts of weather and technology by removing the influence on yields of diverting marginal acres and of changing input use in response to prices. Coefficients of diverted acres and price variable were not significant and only acreage and time variables were retained. Introduction of dummy variables to allow slopes or intercepts of the coefficient c to change by decades did not improve results. Independent variable introduced in the equations measuring the parity ratio, separation of short-term from long-term diverted acres, cropland used for crops (replacing H), or an origin of 1 rather than 50 for lnT also did not improve results. Actual yield (or productivity) as a percent of predicted values were taken as predictors of weather. Weather indices computed with equations in original value and logs and with and without acres gave similar results.

Judging by the lower coefficient of determination for original than logarithm variables, yields, and productivity seemed to be increasing greater than a simple linear rate. R^2s were generally larger for equations allowing percentage annual gains in yields or productivity to slow rather than remain constant over time. An exception was aggregate crop yield, which seemed to be increasing at a constant percentage rate over time.

Appendix Table 1. Components of Total Shift in Real Demand for Farm Output from Years 1971/71 to 1981/82

Year	Domestic Demand				Export Demand			Total Demand Growth	
	Domestic Share of Demand[a]	Domestic Population Growth	Income Elasticity of Demand	Real Income Growth Per Capita	Export Share of Demand[a]	Export Growth[b] Unadjusted	Export Growth[b] Adjusted	Unadjusted	Adjusted
				(Percent)					
1971/72	86.8	1.08	.1	2.88	13.2	1.65	4.55	1.41	1.79
1972/73	82.1	.96	.1	5.70	17.9	28.32	71.77	6.34	14.10
1973/74	77.7	.92	.1	-1.74	22.3	7.13	25.39	2.17	6.24
1974/75	78.3	.99	.1	1.05	21.7	-10.84	-28.80	-1.49	-5.39
1975/76	77.4	.95	.1	2.64	22.6	13.60	5.86	4.01	2.26
1976/77	78.3	1.01	.1	2.93	21.7	5.93	-1.39	2.31	.72
1977/78	76.9	1.07	.1	3.76	23.1	15.30	13.10	1.15	4.14
1978/79	77.1	1.11	.1	1.60	22.9	3.38	5.02	1.75	2.13
1979/80	72.6	1.16	.1	-.89	27.4	16.61	15.20	4.02	3.63
1980/81	74.0	.94	.1	1.48	26.0	-1.94	-3.98	.30	-.23
1981/82	77.5	.95	.1	.13	22.5	-6.53	-20.70	-.72	-6.13
	[(1)/100]	X {(2)	+ [(3)	X (4)]}	+ [(5)/100	X (6)]	=	(7)[c]	

[a] Domestic and export shares adjusted for interfarm sales and farm share of export dollar.

[b] Quantities adjusted for changes in prices to reflect real changes in export demand. The adjusted export growth $(E_t - E_{t-1})/E_{t-1} = (E_t - E_{t-1})/E_{t-1} - e(P_t - P_{t-1})/P_{t-1}$ where e, the elasticity of demand for exports is assumed equal to -1.0.

[c] Computed as shown in row with column data designated by numbers in parenthesis. Column number (7) shows the annual percentage shift in the demand curve at the farm level with deflated prices received by farmers on the vertical axis.

PRINCIPLES THAT SHOULD UNDERLIE A 1985 FARM LAW

(By Harold F. Breimyer*)

1. Traditional reasons for a Government involvement in agriculture are still valid—the small-unit make-up of agriculture that denies the individual farmer economic power or large financial reserve; the inherent instability of farm production and its markets; the importance of a reliable food supply to the Nation's consumers; the necessity of protecting topsoil in the interest of future generations; and, not least of all, concern for the welfare of all farmers and the viability of rural communities.

2. In the broadest sense, acreage and price programs can serve more to reduce instability of agriculture—as a whole, and in individual sectors—than to lift the overall level of returns. Farm programs are more stabilizing than redistributive.

Although farm programs can help, agriculture can be prosperous only if the economy itself thrives—and if our export buyers are doing well and able to buy our farm products. Our agriculture cannot be a prosperous island in a depressed nation or world.

3. An acreage and price support law should be flexible, adaptable. It should be written not on presupposition of farm surpluses, or of shortages, or even of a happy balance between demand and supply. Agriculture is inherently volatile, and conditions invariably change within the term of a law.

4. Writing flexibility into a law implicitly grants wide discretionary latitude to the Secretary of Agriculture. This feature cannot be avoided. Congress can write principles and guidelines into the law, but it cannot impose exact specifications.

5. Provisions of a law must be internally consistent. If production and marketing controls are to be invoked, they absolutely must be tightly effective. If farm crops are generally in surplus and acreage programs are to be used to reduce them, all major crops must be brought into a single unified program. Cross compliance is essential, as is a rule that any reduction of acreage must be net. That is, no farmer should be allowed to offset acreage reduction by adding to his cropland area.

6. The multiple options in farm programs will include acreage allotments and marketing quotas, at least for cash crops.

That is to say, program makers should disabuse themselves of the attractive notion that major production control can be brought about by voluntary programs. Voluntary programs are only partially successful; the free rider principle vitiates their effectiveness. And taxpayers cannot be counted on to fund programs costing in

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the tens of billions of dollars, to induce farmers to do what is in their own collective best interest.

In this respect, PIK is an unfortunately beguiling experience. It suggests that very high costs for voluntary programs are acceptable. The inference is wrong.

7. Price supports by means of commodity storage can do much to reduce the instability of commodity markets, and the buffer stocks are a boon both to domestic consumers and to export trade. But supports cannot be counted on to accomplish all objectives for income in agriculture.

Moreover, overreliance on price supports poses hazards. To push price support levels as high as might be desired for income purposes can run risks of loss of markets.

A new law should therefore continue the practice of 20 years, namely, to treat commodity price supports via loans separately from direct Treasury payments. The latter, so-called deficiency payments triggered by target prices, incorporate the income objectives.

Commodity loan and acreage reduction programs should be operated without regard to size of farm. Direct payments, by sharp contrast, being income supplements, take the adequacy of farmers' incomes into account. Size of farm, or of payment, becomes a consideration.

Moreover, the effect of income-supplement payments on the structure of agriculture cannot be disregarded. At the least, payments should be scaled to favor the moderate size family farm. The present absolute limit on payment size is clumsy and should be replaced by a sliding scale.

8. How to cope with unstable and unpredictable export demand will get much attention as a new 1985 law is written. The glossiest dream will be that somehow foreign trade can be managed so as to compensate for internal instability. Such feats of fantasy should be given no credence.

By and large, we will have to manage our agriculture internally to accommodate the ups and downs in foreign trade, and not vice versa.

Furthermore, as the world's largest grain and soybean trader we are the pacemaker. In that role we are denied some tactics in trading by which smaller shippers nip at us.

9. Acreage programs and conservation can be linked in several ways. Two possibilities are:

a. Cross compliance. This would require that a farmer taking part in an acreage and price support program meet minimum requirements for protecting his land.

b. A more limited linkage, namely, between conservation and direct Treasury (deficiency) payments. Conserving practices would be prerequisite to receiving direct payments. Such a provision would not replace the present ACP practice payments. The cost of building terraces, for example, would still be funded in part by the ACP. But being able to show good protection of soil would qualify a farmer for direct income supplements.

10. The crop insurance program must be rewritten. Again, no road map is offered here but the following ideas deserve attention:

a. Ending the use of private agents and putting the program into the ASCS. The private agent feature has been a clear mistake and should be corrected.

b. Replacing individual yield losses with area-average losses, as a basis for payment indemnities. Drought, the most common cause of low yields, is not selective farm by farm. Professor Harold Halcrow of the University of Illinois has advocated such a program for years. The idea merits more consideration than it has received.

Flood, windstorm, and hail damage payments, however, would be specific to individual farms.

11. I suggest one idea for program design whose time has not yet come but will do so eventually. It is that farm programs be converted to packages for individual farms. Commodity price support, acreage control, supplementary income payment, ACP practice payments, minimum protection of topsoil, and crop insurance would all be wrapped together in a single bundle. Such a new direction would quiet the many criticisms that present programs are patchwork, inconsistent, and lacking a common purpose.

It would be oversanguine to believe that such a new approach could be adopted as early as 1985. But it would be much to the credit of the Senate Committee on Agriculture, Nutrition, and Forestry if the idea were given exposure and public comment were invited.

12. Finally, I hope very much that the 1985 law rectifies one glaring error of past years. It should not have a 4-year term, causing it to end at the beginning of a new administration. It should be for 2 years, or 5 years.

U.S. AGRICULTURE IN THE WORLD ECONOMY*

(By G. Edward Schuh†)

United States agriculture has become integrated into the U.S. and world economies.

It is worth noting that about a year ago I testified before Congress with a paper titled "Agriculture in Transition".[1] An important point I tried to make at that time was that U.S. agriculture faced a severe adjustment problem and that the welfare of farmers would not improve until that adjustment problem was resolved. The need for adjustment came about because a U.S. dollar that was quite weak in foreign exchange markets during the latter half of the 1970's had induced additional resources into agriculture, while a strong dollar in the early part of the 1980's required that resource be shifted out of agriculture.

Little has been done over this past year to address that adjustment problem, with the result that the welfare of farmers is only a little better today than it was a year ago. In fact, over this past year agricultural commodity programs became a serious impediment to agricultural adjustment, with the result that commodity stocks burgeoned further above their year-ago levels.

This has led to the PIK program, a costly return to a bygone era that promises to give farmers some short-term gain in exchange for the potential of considerable longer term pain.[2] Moreover, it does this without in any way addressing the longer term resource adjustment problem which agriculture faces.

The major problem U.S. agriculture faces today is that our commodity programs operate counter to the best interests of both agriculture and of the Nation as a whole. The reason these programs are counterproductive is that they do not take account of the significant changes in the U.S. economy, in the international economy, nor in the way the U.S. economy relates to the rest of the world. These programs were designed for an earlier day and an economic system that was significantly different than the one we have today. If we continue with these programs as they are now conceived, we can expect to see a continuation of excess resources committed to agriculture, program costs that continue at very high

*Adapted from remarks delivered at North Carolina State University and the Farm and Food Policy Symposium: Critical Issues for Southern Agriculture, Clemson University, June 2-3, 1983.

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[1] See Schuh, G. Edward, "U.S. Agricultural policy in an Open World Economy," testimony presented before the Joint Economic Committee of the U.S. Congress, May 26, 1983, Washington, D.C. Most of this part is taken from that testimony.

[2] See Schuh, G. Edward, "The Costs of PIK," Department of Agricultural and Applied Economics, University of Minnesota, St. Paul, May 1983.

levels and general disillusionment with farm programs on the part of the body politic.

I would like to divide my comments into three parts: (1) a discussion of the changes in our economy that are of particular significance to agriculture, (2) a discussion of the implications of these changes for agriculture, and (3) an outline of the main elements of a policy perspective for U.S. agriculture that is consistent with the changed economic conditions it faces. At the end I will have some concluding comments.

CHANGES IN OUR ECONOMY

The U.S. economy, and the international context in which it operates, have undergone dramatic changes in the last 20 to 25 years. Some of these changes are of very great significance for U.S. agriculture and agricultural commodity policies. It is those changes that I would like to discuss in this section.

Increased dependence on trade

The growth in agricultural trade over the decade of the 1970's is well recognized. There are a number of ways this increased dependence on trade can be measured, but my colleague Luther Tweeten recently chose to measure it by estimating the share of total demand for agricultural products that is attributed to exports.[3] The estimates he developed are as follows:

1971/72—13.2	1975/76—22.6	1979/80—27.4
1972/73—17.9	1976/77—21.7	1980/81—26.0
1973/74—22.3	1977/78—23.1	1981/82—22.5
1974/75—21.7	1978/79—22.9	

What we have had is more than a doubling in the dependence on foreign trade as a source of markets for U.S. agriculture from 1971 through 1980. It is important in understanding this increased dependence on trade to note that this change was not unique to agriculture. The economy as a whole became increasingly dependent on trade, and by about the same margin. Hence, the economic forces affecting agriculture were also affecting the rest of the economy. That means that in understanding that growth in agricultural trade we should leave aside episodic events such as the difficulties of the Peruvian fish industry, the weather, and the change in Soviet policy, and search for more basic, underlying changes in economic conditions.

We also need to recognize that this increased openness of the U.S. economy, or increased dependence on trade, makes it more difficult to influence the economy with strictly domestic policies. Unless these policies are designed so as to take account of changes in the international economy, they can well be counterproductive. Unfortunately, we don't seem to have learned that very important lesson.

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[3] Tweeten, Luther, "Excess Farm Supply: Permanent or Transitory?", paper presented at National Agricultural Policy Symposium, Mar. 28, 1983, Kansas City, Mo.

Emergence of a well-integrated international capital market

The emergence of a well-integrated international capital market may be one of the most significant developments of these past 20 years. This capital market now links the national economies of the world together in ways and to an extent that are every bit as important as their linkage through international trade. Moreover, it links the economic policies of individual countries together in ways that are equally as important.

It is worth recalling that at the end of World War II there virtually was no such thing as an international capital market. Such transfers of capital among countries as there were took place on a government-to-government basis and we called it foreign aid. During the 1960's, however, there emerged a Eurodollar market. This market expanded into a Eurocurrency market, and eventually expanded so as to effectively link most of the countries of the world. The value of loans extended in this market is now huge, and centrally planned as well as less-developed market economies use it. At the same time, transfers of capital on a government-to-government basis, or foreign aid, have paled into relative insignificance as a share of the total transfers of capital among countries.

The inability of Poland, Mexico, and Brazil to meet their international debt obligations this past year has made us suddenly aware of the existence of this capital market. It has also made us aware that this market may pose some very real threats to our own capital markets and credit institutions. Less seldom, however, do we recognize the extent to which a link between commodity markets and capital markets has emerged, or the extent to which this capital market provides an important link between monetary policy and commodity markets. I will discuss these additional linkages below.

The shift to floating exchange rates

At a meeting of international monetary authorities in Bretton Woods in 1944, participating countries agreed to establish a system of fixed currency exchange rates at the end of World War II. The motivation for establishing such a system was a general belief that beggar-thy-neighbor competitive devaluations during the 1930's had greatly exacerbated the Great Depression of that decade and spread it on an international scale. It was believed that adherence to a system of fixed exchange rates would keep individual countries from attempting to dump their unemployment problems abroad by devaluations of their currencies and force them to make changes in their domestic policies instead.

This fixed exchange rate system served both the United States and the rest of the world reasonably well for almost 30 years. However, President Nixon devalued the U.S. dollar in 1971, and when that didn't seem to solve our chronic balance-of-payments problems, he devalued again in 1973, closed the gold window, and forced the world to a system of floating exchange rates.

This shift in exchange rate regimes was almost as significant, or possibly as significant, as the emergence of the international capital markets. Looking back to that period, it is amazing how little political debate took place as to whether or not we should change

the system. Similarly, it is amazing how little recognition there is of the significance of that change in the economic system, or of its significance to agriculture and agricultural commodity programs. The change to a system of flexible exchange rates had very important implications for domestic commodity programs. We have not yet fully appreciated the significance of this development for agriculture.

The shift to highly unstable monetary policy

During the 1950's and the 1960's the United States benefitted from relatively stable monetary policies. Inflation was relatively low, and there were not many major shifts in monetary policy.

Starting in about 1968, this felicitous circumstance changed. U.S. monetary authorities embarked on zig-zag, stop-and-go monetary policies that appear to be still with us today. We alternately go from periods of extreme monetary ease to periods of extreme monetary tightness. This has imposed enormous monetary disturbances on the economy. These disturbances or shocks have imposed important shocks on the agricultural sector, and as I will argue below, have been the source of an important share of the instability agriculture has experienced over the intervening period.

IMPLICATIONS OF THE CHANGES IN THE ECONOMY FOR AGRICULTURE

The changes in the economy discussed in the previous section have very important implications for agriculture and for agricultural policy. Let me now discuss these implications.

Increased elasticity of demand

An important part of the intellectual baggage most economists carry around with them regarding U.S. agriculture is that the elasticity of demand for the output of this sector is quite low. This is assumed to be true both for changes in price of the product and for changes in per capita income. In other words, it is generally believed that changing the price of an agricultural product will have very little effect on the quantity demanded, nor will changes in per capita income.

When exports of U.S. agricultural products were relatively small, these assumptions of low responsiveness of demand to changes in price and income were correct and valid. All the evidence we have is that the price and income elasticity of demand for most agricultural products is quite low, on the order of 0.1 or 0.2 in absolute terms. This is because in the absence of trade there are few close substitutes for agricultural products. Moreover, with per capita income levels as high as they are in the United States, there is very little response to changes in income.

However, the increased dependency of U.S. agriculture on international trade has significantly changed these conditions of demand. This change in the conditions of demand is of very great significance for U.S. commodity policy.

With increased dependence on trade, the total demand for U.S. agriculture is a combination of the domestic demand and the foreign demand. The presumption is that the foreign demand is relatively price and income elastic. If trade becomes important, then it

is likely that the average elasticity will be greater than it is under the conditions of a closed economy.

Why is there a presumption that the elasticity of foreign import demand will be relatively high? In part it is because most importers of agricultural products are only marginal importers. Japan, of course, is an important exception. However, most countries import only a small proportion of their total food consumption. That means that these countries have a close substitute for imports readily available. Hence, when relative prices change, these countries can easily substitute domestic production for imports.

Similarly, individual countries can obtain their import supplies from alternative sources, as the Soviet Union has amply demonstrated. Again, this availability of alternative supplies causes the price responsiveness or elasticity of demand for the exports of a particular country to be relatively high.

Given the growth in dependence on trade, the price elasticity of foreign import demand for U.S. agricultural output has to be only slightly greater than -3.0 for the total demand for U.S. output to be greater than -1.0. If we export as much as half of our total production, as we typically do in the case of soybeans and wheat, for example, then the foreign elasticity of import demand for our output only has to be slightly greater than -2.0 for the elasticity of total demand for our output to be greater than -1.0.

The important point about this issue is that if the price elasticity of demand for the total output of our product is greater than -1.0, the basis of our price policy significantly changes. Under these circumstances, a decline in our price will actually increase the total income to producers, not decrease it, as is conventionally believed. The point is that a 1-percent decline in the price of our product will increase the quantity sold by more than 1 percent. Hence, total income will increase.

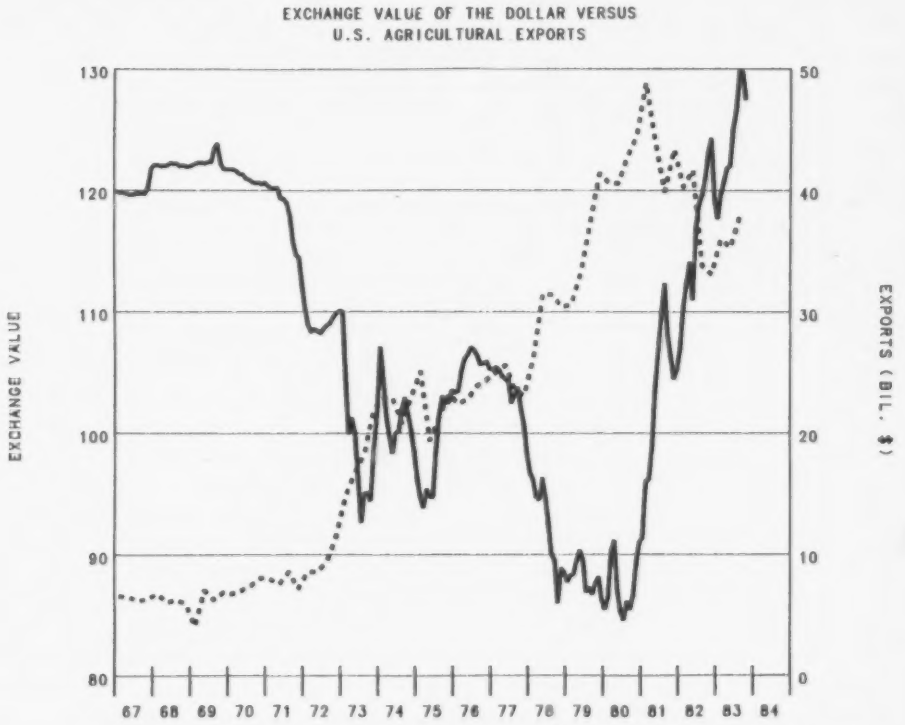
This important aspect of our becoming more dependent on trade has been largely ignored by both policymakers and farm groups. We sorely need to recognize the changed conditions. Whereas in the past, an increase in price actually increased total farm income, since there was a less than proportional decline in sales, today the reverse is true. Hence, for most of our commodities that are exported, an increase in price actually leads to a reduction in total income to agriculture rather than an increase. Unless the Government stands ready to acquire the supplies that are not sold when prices rise, farmers actually lose income in the aggregate.

Similar arguments apply with respect to the income elasticity of demand. A larger and larger share of our foreign demand comes from the low-income less-developed countries. For these countries, the income elasticity of demand for agricultural output is relatively high. When this is combined with the domestic component of demand, the average income elasticity of demand becomes significantly higher.

Unfortunately, there is little recognition of how our increased dependence on trade has increased the price and income responsiveness of demand for our agricultural output. Instead, we still tend to think of this price responsiveness as being quite low. This causes us to press for higher prices, when in fact we should be pressing for lower prices if we want to increase total income.

Adjustment in the international economy

Changes in the value of the U.S. dollar in foreign exchange markets bring about important adjustments in the international economy. The data presented in chart 1 illustrates this very well. The rise in our agriculture exports in the 1970's is seen to be closely associated with the fall in the value of the dollar. The decline in our exports in the 1980's, by the same token is strongly related to the rise in the value of the dollar. Both of these adjustments are consistent with the precepts of economic theory. The failure to take account of these adjustments induced by change in the value of our currency has caused our domestic commodity programs to be contrary to the best interests of our farmers and the Nation as a whole. I can best illustrate that by referring to the experience of the past 2 years.



Over that period, the value of the U.S. dollar rose something on the order of 25 percent, depending on how the increase is measured and the exact period chosen as a basis. During that same period, the inflation-corrected value of the loan rate for three of our principal exports—corn, wheat, and soybeans—remained approximately constant in terms of our domestic currency. However, in terms of the currencies of countries that import from us, the value of those loan rates increased by approximately the 25 percent that the value of the dollar rose on a trade-weighted basis. Hence, even though there was virtually no change in that domestic price as determined by our domestic commodity programs, there was a signifi-

cant increase in these prices as perceived by the importing countries and other exporting countries.

There are two important consequences of this rise in price. First, it choked off the quantity demanded of our exports. This is an important reason why the exports of our agricultural products have declined so significantly over the last 3 years—from $43 billion in 1980 to a projected $34 billion in the current marketing year. Longmire and Morey [4] of the USDA's Economic Research Service estimate that the rise in the value of the dollar alone in 1981 and 1982 reduced the value of our agricultural exports by $3 billion dollars and 16 million tons, 10 million of which was corn. These numbers indicate the extent to which the foreign demand for our agricultural output is responsive to price. It also indicates the relative role of changes in the value of the dollar in explaining the slump in our exports and the decline in U.S. farm income.

The problem is that the story does not stop there. The rise in prices of these commodities in terms of the currencies of other countries is a strong stimulus to increased output in other countries. This increase in supplies in other parts of the world at the same time that the quantity demanded of our exports has declined has been a significant cause of our decline in market shares. It is in addition to the effects of the European Community's use of export subsidies and the lingering effects of the embargo on sales to the Soviet Union. In fact, it may be the most important effect of the three.

The important thing to recognize is that this kind of an adjustment is precisely what should happen with a system of floating exchange rates. When the value of the dollar rises in foreign exchange markets, our share of total trade should decline, other things being equal, and the share of other traders should rise. Similarly, our exports should decline, other things being equal, and the exports of other countries should increase.

It is for this reason that it so counterproductive for us to berate the Canadians and Australians and other exporters because they don't reduce their agricultural output at the same time we do. In fact, we must appear rather foolish to them, for the very price signals we are sending to the international economy are strong incentive for them to increase the output of their export commodities. At the same time, if it were not for our commodity programs, we would be giving even stronger signals to our own producers to reduce their output. That is precisely the way international adjustment should take place under our present instituted arrangements.

Current commodity programs are counterproductive

Our domestic commodity programs were designed for the most part back in the 1930's when trade was relatively unimportant to U.S. agriculture. They were refined in the immediate post-World War II period and essentially adapted for conditions in which trade was still relatively unimportant and in which the international economy operated with a system of fixed exchange rates.[5]

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[4] Longmire, Jim, and Art Morey, "Exchange Rates, U.S. Agricultural Exports Prices and U.S. Farm Program Stocks", Economic Research Services, U.S. Department of Agriculture, Washington, D.C., November 1982.

[5] Even in that earlier period our commodity programs had pernicious effects for agriculture.

As trade became important in the 1970's, the programs underwent significant change with both the 1973 and 1977 legislation to make them more suitable to an open, trading economy. More flexibility in prices was established to enable us to remain competitive over a wider range of conditions, and a reserve program was established, together with a system of deficiency payments, to even out fluctuations in agricultural prices and farm incomes in what was obviously expected to be a more unstable economic environment.

These programs are still counterproductive, however. Target prices are encouraging production at levels that can no longer be absorbed by domestic and foreign markets at prevailing price levels. The price floor established by our loan rates are providing strong incentives for producers in other countries to increase their output. Those same loan rates provide an umbrella for producers in other countries, with the result that they can come in and undersell us while we support the market. Unfortunately, if we were to set out to design a system that would cause us to lose market share, we would be hard pressed to design a better one. Then we lose credibility on the international scene when we lecture others to do something different than the very price signals we are sending out suggest they should be doing.

To summarize, in a world of flexible exchange rates with wide fluctuations in the value of the dollar, our current commodity programs no longer serve us well. In fact, they are demonstrably counterproductive both to farmers and to the Nation as a whole. Moreover, they have caused the Treasury costs of the programs to increase at a very rapid rate. Unmarketable supplies are thrust into Government-controlled stocks at the very time that deficiency payments remain quite high.

The budget deficit and agriculture

Agriculture did well during the 1970's when the dollar was weak. It has fared poorly in the 1980's when the dollar has been strong. Given that agriculture is an export sector, this was to be expected.

In attempting to understand what has happened to agriculture, it is important to understand what has caused this very great change in the value of the dollar. It is true that other factors affected our export performance both in the 1970's and in the early 1980's. What has not received sufficient attention in my judgment, however, is the very large changes in the value of the dollar. Hence, I choose to focus on this issue.

Two important factors have affected the value of the dollar in both periods: our energy policy and our monetary and fiscal policy. The combination of OPEC-induced increases in petroleum prices in the 1970's and our own failure to let those price increases be fully reflected to the domestic economy caused our import bill for petroluem to burgeon significantly. In effect, we were subsidizing the importation of petroleum at the very time the cartel was unilaterally raising prices. The large increase in our petroleum import bill contributed importantly to the weakness of the dollar in the latter half of the 1970's.

At the same time, inflation was out of control in the domestic economy, and there seemed to be little commitment to do anything

about it. This further contributed to a weak dollar—a weak dollar which significantly benefitted agriculture as an export sector.

As we moved into the 1980's, both of these policies changed. President Reagan deregulated the domestic petroleum industry, thereby removing the implicit subsidy on imports, putting more competitive pressure on the OPEC, and eventually contributing to a decline in the price of petroleum. The result has been a very significant decline in our petroleum import bill, an important factor contributing to the strength of the U.S. dollar in the 1980's.

At the same time, the Federal Reserve has taken significant steps to bring inflation under control at the same time that our budget deficits have run out of control. The Federal Reserve for all practical purposes stopped monetizing the budget deficits. The result has been very high interest rates.

As long as we continue to incur large budget deficits and the Federal Reserve does not monetize the corresponding debt, we are likely to have a strong dollar. In effect, the real interest rate is permitted to rise by a sufficient amount to generate the savings needed to finance the debt. With a well-integrated international capital market, these savings come from abroad as well as from domestic sources. It is the inflow of savings and capital from abroad that helps keep the dollar strong.

My point is not to argue that the Federal Reserve should pursue an easier monetary policy and monetize the debt generated by out budget deficits. That would surely lead to rampant inflation again and eventually to another boom and bust cycle. My point is to emphasize the extent to which the problems of U.S. agriculture are rooted in our domestic monetary and fiscal policies, rather than in the agricultural sector alone.

Monetary disturbances to commodity markets

After two decades of relatively stable prices for agricultural prices during the 1950's and 1960's, these prices suddenly became very unstable during the 1970's and into the early 1980's. There are a number of explanations for this increased instability, but I would like to focus again on one that generally tends to be neglected—the impact of our unstable monetary policy.

As noted above, U.S. monetary policy during the 1950's and the 1960's was relatively stable. Moreover, during that period the nature of our economic system was such that such changes as there were in monetary policy had little effect on agriculture. In effect, monetary policy could be whatever it wanted to be during that period and there would have been little impact on agriculture or on commodity markets.

Both of these conditions changed in the 1970's. Monetary policy became a great deal more unstable. And the structure of the economy changed so that agriculture suddenly became one of the sectors that bears an important share of the adjustments to changes in monetary policy.

The key factors here are the emergence of that well-integrated international capital market and the shift to a system of flexible exchange rates. Under these conditions, export sectors and sectors which compete with imports bear the burden of adjustment to changes in monetary policy. For example, if the Federal Reserve

tries to slow down the economy by slowing down the growth in the monetary aggregates, the result is an increase in interest rates in the domestic economy. This increase in interest rates attracts an inflow of capital (or a reduction in the outflow), which in turn bids up the value of the dollar in foreign exchange markets. The rise in the value of the dollar chokes off our exports, while at the same time causing imports to come in at a lower price in terms of the domestic currency. The result is a dampening down of both the export sectors and the import competing sectors. The Federal Reserve accomplishes what it sets out to do, but the burden of the adjustment is forced onto the export and import competing sectors. An important point to note here is that the problems of the automobile and textiles industries are cut in part from the same fabric as the problems of agriculture.

When the Federal Reserve decides to pursue an easier monetary policy so as to stimulate the economy, exactly the reverse occurs. Interest rates decline, capital flows out of the country (or the inflow declines), the value of the dollar declines, our exports become more competitive in international markets and imports become expensive. The result is an expansion of the export sectors, including agriculture, and an expansion of the import-competing sectors of the economy. Again, a major share of the burden of adjustment is forced onto these sectors of the economy.

The important point is that these changes in the structure of our economy came about precisely at the same time that our monetary policy became a great deal more unstable. Hence, a great deal of the instability of agriculture over the last decade has been due to monetary disturbances, not changes in the weather as is commonly believed. Agriculture, as an export sector, has been victimized by a highly erratic monetary policy at the very time that it became one of the sectors that bore the adjustment to changes in monetary policy.

A POLICY PERSPECTIVE FOR THE FUTURE

A policy for agriculture must take into account the changes in our economy and in the way we relate to the international economy. Given the extent to which our economy has become internationalized, solutions to many of our problems must be sought in the international arena. They will not likely be found in policies designed only with the domestic economy in mind, to the neglect of the international economy.

Commodity programs

Commodity programs as we have conventionally understood them have probably outlived their usefulness. Given the changes in our economy, they can probably bring about more stable prices and farm incomes only at the expense of very high budget costs. Moreover, if international monetary events continue as they have over the past decade, these programs are demonstrably counterproductive. They preclude the very adjustments that a regime of flexibile exchange rates is designed to bring about.

We should also recognize that economic development and deregulation of the U.S. economy has reduced a great deal of the need for

such programs. We now have well-integrated domestic capital markets, plus commodity markets that are also quite efficient. Farmers can participate in both of these markets in a variety of ways not available to them in the past. Moreover, improvements in communication and transportation have been such that information and stocks and resources can flow reasonably freely. The progressive deregulation of both the commodity and credit markets enable these markets to bear a great deal more of the adjustment to changing demand and supply conditions than they could in the past. Farmers can forward price, contract, and make use of credit and capital markets much more extensively than they did in the past. And an efficient capital market is available to enable private speculators to help carry stocks and even out fluctuations in commodity prices.

I would make three caveats to my suggestion that we take as a goal the elimination of domestic commodity programs as we now know them. First, the programs do need to be phased out gradually, especially such programs as that for dairy. That program has induced far too many resources into the dairy sector. A period of adjustment, plus positive adjustment policies, are needed to help bring the sector into adjustment.

Second, a case can probably be made for a production or income insurance program for small producers, especially those embarking on internal growth. Such producers will probably find it difficult to access credit and capital markets in the same way that larger producers can. Hence, some means should be available to keep them from being wiped out when natural disasters strike or the market makes a sudden lurch. Such programs should be cost shared, however, along the lines of the present all-risk crop insurance program. Moreover, the subsidy should be kept modest so that resources are not induced into areas that would not otherwise be in production, or so as to keep producers in production who would not otherwise be able to survive.

Third, one could probably make a case for a modest loan program at relatively low levels. The purpose of such a program should be to circumvent periods of very tight credit that might coincide with the planting season or the marketing of the crop. The biological constraints of agriculture are what ultimately give such a program some social value. A period of tight money that coincides with the planting season may not just delay a crop for a period of months, as would occur in the nonfarm sector. It may well cause a loss of production for a year. The same applies to the marketing season, when the inability to borrow at that time may force a crop onto the market, causing prices to decline, only to rise at a later date.

The loan levels for such a program should be kept modest so as not to interfere with trade. The interest rates should be subsidized only in periods of extreme monetary tightness.

Science and technology policy

Science and technology policy for U.S. agriculture needs to be seriously rethought. It may now be the key to our remaining competitive in international markets. And it may now be an important source of income gains for U.S. farmers.

With the exception of the dairy sector, a major share of the benefits of technical change in U.S. agriculture in the past has been passed on to the consumer. With international trade being relatively unimportant, increases in productivity led to lower prices, and the consumer has been the major beneficiary.

With increased dependence on trade, producers stand to reap a larger share of the benefits of technical change than they have in the past. As the demand for our agricultural output becomes relatively more elastic, productivity-induced increases in output lead to a relative expansion of sales compared to the decline in price. The producer benefits.

When viewed in this context, farmers should be paying for a larger share of the costs of science and technology. The check-off system now widely used provides a convenient means of assembling the producers' contributions to such programs and channeling them to research institutions. In addition, however, the Federal Government now has a greater interest in agricultural research than it had during the 1950's and 1960's. Maintaining a highly productive agriculture is the key to maintaining a strong export performance. And a strong export performance is in the national interest. Hence, in the future we should have a stronger commitment on the part of the Federal Government to agricultural science and technology. In fact, such a program should become an important part of our export promotion drive.

Fiscal policy

The large budget deficits we are now incurring, and that are predicted to continue into the foreseeable future, are doing serious damage to agriculture and are an important cause of current farm problems. These deficits have caused interest rates to be higher than they otherwise would be. This has caused the dollar to be strong, and that in turn has choked off our exports and translated international prices of agricultural commodities into the domestic economy at low levels.

Unfortunately, we have forced the Federal Reserve to bear the brunt of the battle against inflation. It can do it, of course, as recent experience has demonstrated. But it does it at the expense of real interest rates that are unprecedentedly high by historical standards. A more balanced budget would cause interest rates to decline. With that decline would come decline in the value of the dollar, and help our agriculture, textile, and automobile industries. In fact, there is probably nothing more important to helping these important sectors of our economy than to get our budget more nearly in balance.

Monetary policy

An easing of monetary policy would undoubtedly aid agriculture. But that should be done only as the budget is brought into balance, or we will be back on another inflationary spree.

However, there is at least one aspect of monetary policy that could be changed with considerable benefit to agriculture. That is to shift this policy into a more stable mode. The stop-and-go monetary policies of the last 15 years have imposed large monetary shocks on agriculture. A great deal of agriculture's problems would

disappear if monetary policy were more stable. We would not have these alternating periods of feast and famine that have characterized these last 15 years. Asset values would not be bid up during periods of easy money, only to be wrenched downward when a policy of monetary tightness followed. And farmers would be able to plan more effectively, and therefore to make more efficient use of their resources.

Reforming international institutions

The monetary and trade institutions which serve the international economy were largely created at the end of World War II. Those institutions served both the U.S. and the international economy reasonably well for a while. But many of them have broken down with the crush of economic forces, or have grown largely irrelevant. In some cases, adequate international institutions were never in place and still need to be established.

In terms of furthering the interests of agriculture, two issues need to receive serious and immediate attention.[6] The first is the need to establish an International Central Bank. For all intents and purposes the United States now serves as central banker for the world. The world is essentially on a dollar standard. Hence, what the United States does about its monetary policy is of central importance to the world economy.

Although the United States reaps certain gains from being central banker to the world, it does so only at the expense of imposing certain costs on selected sectors of the economy. These costs arise because the United States has to overvalue its currency if it is to be the central banker for the world. An overvalued currency is an implicit tax on export sectors such as agriculture. It is also an implicit import subsidy that discriminates against import-competing sectors such as the automobile and steel industry.

The main elements of an International Central Bank could be had by converting international dollar reserves into Special Drawing Rights (SDR's) and giving the International Monetary Fund (IMF) a mandate to keep the stock of these SDR's growing at a constant rate. Although not a full central bank as we understand it, the IMF would have the principal mandates of an international central bank. Moreover, the U.S. Federal Reserve bank would then be left with the essentially technical problem of adjusting to conditions in international monetary markets.

I believe the creation of such an International Central Bank would reduce or even eliminate a great deal of the monetary instability we have experienced these past 15 years. It would also remove the onus from us of having to overvalue our currency in foreign exchange markets. And this would benefit agriculture (as well as the automobile industry) in a very significant way.

The second issue needing serious attention at the international level is the need to reform the General Agreement on Tariffs amd Trade (the GATT). Here, a number of things are important. First,

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[6] For more detail on this set of issues, see Schuh, G. Edward, "Towards Reform of Our International Monetary and Trade Institutions", presented at Invited Seminar Series, "Current Issues In and Approaches to International Development", International School for Economic Development Studies, Colorado State University, Fort Collins, Colorado, December 3, 1982.

trade in agricultural products was largely excluded from the benefits of the GATT when it was originally created. That, combined with the reluctance to discuss domestic commodity programs in later multilateral negotiating sessions, has kept agriculture from benefitting from the general trade liberalization that has occurred during the post-World War II period.

The second thing to change in the GATT is to broaden its membership base. The GATT was created in large part to serve the interests of the industrialized countries of the West. The centrally planned economies and the less-developed countries were not signatory to the agreement in the beginning. Although membership in the agreement has grown over the years, the centrally planned and less-developed countries are still largely outside the reach of its provisions. Yet it is precisely with those countries that out agricultural trade has expanded. Hence, an international institution which we have so carefully nurtured over the years is less and less effective in protecting us from trade distortions and interventions.

Now is not a particularly good time to renegotiate the GATT. However, as the world economy recovers, we should make a serious attempt to renegotiate the GATT or to establish a comparable new organization in its place. High priority should be given to including agriculture in these negotiations, to including as many countries as possible, and to establishing rules for distortions in foreign exchange markets as well as in trade markets.

Adjustment policies

Adjustment policies are important for two reasons. In the short term, there is the need to bring agriculture into adjustment with its current market opportunities. This applies not only to dairy, but to export commodities such as wheat, corn, and cotton as well. If the dollar remains strong, and there is little reason to expect it not to in the short run, resources need to be adjusted out of agriculture if production is to be brought into balance with demand.

The other kind of adjustment is that needed to respond to changing conditions in domestic and international markets over the longer pull. If prices are permitted to flex both in the domestic market and abroad, these kinds of adjustments should come about relatively easily, unless we should continue to have large monetary disturbances.

In addressing the adjustment problem it is important to note that under current conditions it should be easier for agriculture to adjust than it was in the past. In the first place, some 63 percent of the income of farm families now comes from off-farm sources. That indicates the extent to which agriculture has become an industry of part-time employment. It also indicates the extent to which economic activity in the United States has become decentralized.

In any case, the agricultural labor force is already well integrated into the nonfarm labor market. Making additional adjustments of labor should not be as difficult as it was in the 1950's and 1960's. Moreover, the agricultural labor force as a share of the total labor force is much smaller than it once was. That in itself should make the adjustment easier.

Similarly, agriculture is much more independent on inputs purchased from the nonfarm sector than it once was. As relative prices

change, the use of these inputs changes accordingly. To the extent these inputs are important sources of output, as in the case of fertilizer, a decline in commodity prices which causes a decline in fertilizer usage brings about a corresponding adjustment in output.

In dealing with the short-term adjustment problem the most efficient solution may be by means of something like the old soil bank program. Incentives for participating should be designed to remove from production that land that is subject to greatest wind and water erosion. Such an approach will enable the program to attain both resource adjustment and soil and water conservation objectives.

CONCLUDING COMMENTS

I have sketched out a rather unconventional policy agenda. Domestically, I suggest that we move away from commodity programs as quickly as we can deal with the corresponding adjustment problems. At the same time we need to reduce our budget deficits and work towards a more stable monetary policy so we no longer victimize agriculture with our macroeconomic policies. On the international scene, we need to work for an International Central Bank so we no longer need to overvalue our currency, and for a reform of the GATT so as to have a more efficient apparatus for dealing with trade conflicts and trade problems.

Our economy has changed dramatically over the past 20 years. The changes have altered in an equally dramatic way the context of U.S. agricultural policy. If we don't change our perspectives so as to keep up with these changes, we are doomed to have commodity programs that don't work, unhappy farmers, and a body politic that is increasingly disenchanted with farmers and farm programs. It behooves us to catch up with the times!

THE 1985 FARM BILL

(By Don Paarlberg*)

The most important provisions of the 1981 farm bill are related to price and income support for the major commodities. It is these programs and their treatment in the 1985 farm bill that are the subjects of this paper.

Commodity legislation, which expires with the 1985 crop, brought a degree of stability in domestic markets and cushioned farm income against recession and burdensome supply.

Nevertheless, the Agricultural Act of 1981 has been accompanied by three adverse developments: (1) rising costs, (2) loss of markets, and (3) the need for deep production cuts.

COSTS

Costs of these programs have escalated as follows:

Budgetary expenditures

Fiscal year:	*Billions*
1979	$3.6
1980	2.9
1981	4.0
1982	11.6
1983	21.7

Source: USDA.

Costs for the 1983 programs will approximate two-thirds of the net farm income of all of agriculture.

LOSS OF MARKETS

Export markets have been lost while this legislation was in force, particularly for wheat:

TABLE 1.—WORLD WHEAT AND FEED GRAIN EXPORTS AND MAJOR EXPORTERS' SHARE

	1979	1980	1981	1982	1983 [1]
Wheat:					
World exports (million metric tons)	86.0	94.2	101.3	97.8	98.5
Share of total (percent):					
United States	43.3	44.5	48.5	40.9	38.6
Canada	17.4	18.0	17.5	21.6	21.8
EC (10)	12.1	15.6	13.3	13.8	12.7
Feed grains:					
World exports (million metric tons)	100.9	105.5	103.6	89.0	92.4
Share of total (percent): United States	71.0	68.6	59.3	59.9	63.6

[1] Estimated.

Source: "Economic and Marketing Information for Missouri Agriculture" (vol. XXVI, No. 10, October 1983, p. 3).

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PRODUCTION CUTS

Accumulated stocks have led to deep acreage cuts. In 1983, under the payment-in-kind program, acreage reductions were as follows:

Million acres harvested:	
Wheat	61.0
Corn	51.6
Cotton	7.4
Percent cut from 1982:	
Wheat	23
Corn	30
Cotton	23

These cuts have been accompanied by expanded production in Canada, Australia, Argentina, and the European Economic Community. If we continue to cut production, the U.S. share of export markets will fall farther.

What has been the cause of these adverse developments? Clearly it is the consequence of setting loan and target levels too high, so that we overstimulated production and priced ourselves out of markets.

There has been insufficient awareness of the fact that American agriculture is now deeply dependent upon export markets and thus is affected by supply, demand, and price in other countries. In an earlier day, when we were less reliant on foreign markets, we had a greater degree of autonomy regarding price supports and production controls. Now our price supports have become an umbrella for the rest of the world and our production cuts have made room in the market for the expanded production of other exporters.

Experience with loans, targets and market prices during the Agricultural Acts of 1973, 1977, and 1981 has been as shown in table 2.

For the Agricultural Act of 1973, farm prices were generally above loans and targets, so that budgetary expenditures were relatively modest (table 3).

TABLE 2.—SEASON AVERAGE TARGET PRICES, LOAN LEVELS, AND FARM PRICES FOR CORN, WHEAT, AND COTTON UNDER THE AGRICULTURAL ACTS OF 1973, 1977, AND 1981

	Corn, dollars per bushel			Wheat, dollars per bushel			Upland cotton, cents per pound		
	Target	Loan	Farm	Target	Loan	Farm	Target	Loan	Farm
Act of 1973:									
1974	1.38	1.10	3.02	2.05	1.37	4.09	38.0	27.06	42.7
1975	1.38	1.10	2.54	2.05	1.37	3.55	38.0	36.12	51.1
1976	1.57	1.50	2.15	2.29	2.25	2.73	43.2	38.92	63.8
1977	2.00	2.00	2.02	2.90	2.25	2.33	47.8	44.63	52.1
Act of 1977:									
1978	2.10	2.00	2.25	3.40	2.35	2.97	52.0	48.00	58.1
1979	2.20	2.10	2.52	3.40	2.50	3.78	57.7	50.23	62.3
1980	2.35	2.25	3.11	3.63	3.00	3.91	58.4	48.00	74.4
1981	2.40	2.40	2.50	3.81	3.20	3.65	70.9	52.46	54.3
Act of 1981:									
1982	2.70	2.55	[1] 2.65	4.05	3.55	[1] 3.53	71.0	57.08	[1] 58.0
1983	2.86	2.65	[2] 3.40–3.80	4.30	3.65	[2] 3.50–3.70	76.0	55.00	[3] NA
1984	3.03	2.55	[4] NA	4.45	3.30	[4] NA	81.0	55.00	[3] NA

TABLE 2.—SEASON AVERAGE TARGET PRICES, LOAN LEVELS, AND FARM PRICES FOR CORN, WHEAT, AND COTTON UNDER THE AGRICULTURAL ACTS OF 1973, 1977, AND 1981—Continued

	Corn, dollars per bushel			Wheat, dollars per bushel			Upland cotton, cents per pound		
	Target	Loan	Farm	Target	Loan	Farm	Target	Loan	Farm
1985	[5] 3.18	[5] 2.55	[4] NA	[5] 4.65	[5] 3.55	[4] NA	[5] 86.0	[5] 55.00	[3] NA

[1] Preliminary.
[2] Projections as of Oct. 13, 1983.
[3] USDA is prohibited from publishing cotton price projections.
[4] Not available.
[5] Not announced; minimum levels under 1981 act.

Source: USDA.

TABLE 3.—CCC NET BUDGETARY EXPENDITURES FOR PRICE AND INCOME SUPPORT (AND RELATED PROGRAMS [1]) FOR FEED GRAINS, WHEAT, COTTON, AND FOR OTHER PRODUCTS

(In millions of dollars)

Fiscal year	Feed grains	Wheat	Cotton	Other	Total
Act of 1973:					
1974	553	242	725	−575	1,004
1975	206	22	233	−304	575
1976 [2]	124	68	8	607	1,014
1977	659	1,899	104	533	3,809
Act of 1977:					
1978	2,288	844	224	2,093	5,623
1979	1,144	308	141	1,905	3,572
1980	1,286	879	64	−447	2,717
1981	−533	1,542	336	731	3,994
Act of 1981:					
1982	5,397	2,237	1,190	428	11,598
1983 [3]	7,478	3,898	1,510	8,844	21,730

[1] Related programs include short-term export credits and repayments, storage facility programs, and disaster payments.
[2] Fiscal year July 1 to July 1; outlays for July 1 to October 1 were (in millions of dollars) −29 for feed grains, 123 for wheat, −12 for cotton, and a total of 452.
[3] Estimates as of July 1, 1983.

Source: USDA.

This situation began to change during the period covered by the act of 1977, so that expenditures increased. Production controls were used only to a limited extent and markets usually cleared.

For the year 1982, under the act of 1981, farm prices mostly rested on the loan level and the Government acquired heavy stocks. Supported prices were sometimes above the competitive world level. Our products were priced out of export markets. We became the residual supplier, as had so often been the case since 1933, when the programs was initiated. Stocks accumulated and in 1983 deep production cuts were applied.

Two years' experiences remain under the 1981 legislation. What these years will bring cannot be foreseen.

It is unlikely that the Congress desired the price and cost pattern experienced under the 1973 or the 1977 act, or that it sought the situation now occurring under the act of 1981.

The difficulty comes from projecting, far into the future, loan and target levels that either are firm or very difficult to change. The projection is really for 5 years, since the law must be written a year before it takes effect. Inflation and deflation, good crops and poor crops, recession and recovery, liberal or restrictive trade prac-

tices, heightened or reduced international tensions, cannot be foreseen that far ahead. Writing a 4-year farm bill in 1985, the Congress would have to anticipate the behavior of these powerful variables to the year 1989. Assumptions about inflation rates are likely to be wrong.

Professional forecasters have great difficulty predicting events for the next year. The Congress cannot foresee with accuracy, 5 years into the future, the weather, the economic situation, the circumstances of war or peace, or the climate of international trade. And we now have ample evidence that commodity legislation is not sufficiently strong to discipline these potent forces.

Needed are loan levels that permit markets to clear most of the time so that we can readily access foreign markets and avoid the need for deep acreage cuts. And we need price targets that hold Government costs to reasonable levels. To achieve these goals we need more flexibility than the law presently allows.

How can greater flexibility be achieved? There are three alternatives:

(1) Write a bill of shorter duration.

(2) Write a 4-year bill but give discretionary authority to the executive branch.

(3) Write a 4-year bill but provide for automatic adjustment of loans and targets by indexation or by relating to some percentage of a moving average of market prices.

In the opinion of this writer, all of these alternatives are preferable to the existing practice. The best of the three, in the author's view, is to provide automatic adjustment by the use of indexation or a moving average. For loan levels, some percentage of the moving average of the farm price for the immediately past years would seem desirable, since it would reflect more recent market conditions. True, the loan thus determined would show a lag with respect to most recent market behavior. But such a procedure would provide a blend of the two desired attributes: stability and flexibility.

For targets, a level moderately above the loan could be established as to provide some degree of income insurance and still permit American farmers to be competitive in export markets. With better market access, production cuts would be less needed.

The modifications would permit three improvements over the act of 1981:

(1) Reduction in cost.

(2) Better access to markets.

(3) Fuller use of agriculture's resources.

In the short run, if this approach were adopted, the amount of Government money going to farmers would be reduced. But in the long run we would build markets, make better use of our resources and increase farm income.

A sizeable short-term reduction of Government payments would not hurt agriculture as much as might first appear. The products protected under the Agricultural Act of 1981 bring in less than half the income from the sale of crops and livestock. And the net income from sale of all farm products in 1981 totaled only one-third of the net income of farm people from all sources; off-farm income accounted for the balance. During 8 of the last 10 years, the

off-farm income of American farmers has been greater than their net farm income.

Farmers need not be as reliant on commodity programs as they have become. Crop insurance, forward contracting, and commodity options can provide a measure of stability to price and income without putting markets into a straitjacket.

POLICY CONCERNS FOR THE 1985 AGRICULTURAL AND FOOD POLICY

(By Harold D. Guither, Susan E. Offutt, Stephen C. Schmidt, and Robert G. F. Spitze*)

INTRODUCTION

This paper addresses the questions that must be answered by Members of the U.S. Senate Committee on Agriculture, Nutrition, and Forestry as they consider omnibus agricultural and food legislation in 1984–85 by focusing on four important policy areas. These are: (1) Current economic characteristics of farming and the agricultural sector; (2) agricultural trade trends and issues; (3) international implications for domestic agricultural and food policy; (4) selected alternative policy directions.

CURRENT ECONOMIC CHARACTERISTICS OF FARMING AND THE AGRICULTURAL SECTOR

To assess current policy needs for American agriculture it is appropriate to look at the important economic characteristics that prevail today and recognize the changes that have taken place. Policymakers might want to investigate whether the economic characteristics of the agricultural sector have changed more in recent years than have public policies changed to deal with the economic problems at hand.

The most significant economic characteristics that should affect future agricultural policy considerations are: (1) problems of cash flow and heavy farm indebtedness; (2) the international dimension for U.S. agriculture that has emerged; (3) the decline in the farm population; (4) the diverse organizational structure of agriculture; and (5) the narrowing gap between farm and nonfarm per capita incomes.

Cash flow

The ratio of cash costs to receipts has increased and is especially high on large farms. In 1940 and 1950 production expenses took about 50 percent of every dollar of gross income from farming. By 1960, production expenses comprised 70 percent of gross income, by 1970, 76 percent, and for the 5 years 1978–82, production expenses equaled about 82 percent of gross income.

Current cash flow for many indebted farmers is inadequate to cover current cash expenses. Instability of income and high interest rates have contributed to these problems.

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International dimension

Agricultural exports of all agricultural commodities in the 1930's were about 10 percent or less of total cash receipts. Even in 1960, exports made up only 14 percent of cash receipts. In 1980–81, the percentage was about 31 percent and dropped to about 27 percent in 1981–82.

The decline in volume of agricultural exports has contributed to a serious income problem in agriculture. It has also contributed to a serious financial crisis as expanded debt commitments based on expectation of continued exports and prosperity for agriculture have caused serious cash flow problems and reduced equity in land values. The decline in the export market has also created a serious challenge to farm programs and policymakers as farm program costs have spiraled upward in 1982 and 1983.

The farm population

The farm population in 1933 was 32 million, but by 1940, 30.3 million, and in 1981, 5.79 million. Surplus of labor on farms that once was generally looked upon as one of the "adjustment problems" of agriculture is no longer considered a serious problem.

Organization of farm output

The organizational structure, the numbers and types of farms and how they are organized, introduces many important issues about the future direction of agricultural and food policy. Farm numbers have dropped from 6.8 million in 1935 to 2.4 million in 1983.

In 1929, about 1 percent of the farms produced about 15 percent of total sales. About one-fourth of the farms produced 30 percent of sales. By 1982, 1 percent of the farms produced 30 percent of total sales and a little over one-fourth 88 percent of total sales (see table 1 for additional relevant data). The remaining three-fourths of the farms produced only 12 percent of total value of production.

With the high proportion of smaller farms has come the increasing share of off-farm income. In 1982, those farms of $40,000 in sales or less averaged a net loss on farm income. However, in each sales class of farms below $40,000, the average off-farm income provided the funds for family living expenses that were not available from farming income.

Specialization has also occurred. Fewer farms now produce the total supply of individual farm commodities. For example, in 1978, the last years for which census data are available, 81,917 farms produced the entire national output of vegetables, sweet corn, and melons. All the poultry was produced on 94,854 farms. Another 221,007 farms produced all the dairy products, 94,854 farms produced all the sheep and lambs, 470,518 farms produced all the hogs and pigs, and 1,411,843 produced all the cattle and calves. There were 1,050,178 cash grain farms.

TABLE 1.—SELECTED CHARACTERISTICS OF FARMS BY VOLUME OF SALES, 1982

	Large farms (sales $200,000 and over)	Medium farms (sales $40,000 to $199,999)	Small farms (sales under $40,000)	All farms
Numbers:				
Number of farms	112,000	579,000	1,709,000	2,400,000
Percent of all farms	4.7	24.1	71.2	100.0
Percent of all sales	49.1	38.5	12.4	100.0
	Dollars Per Farm, Including Households			
Income:				
Net income farm from farming	$169,401	$10,100	—$537	$9,960
Off-farm income	16,696	10,746	18,338	16,430
Total income farm and off-farm sources	186,097	20,846	17,801	26,390
	Dollars Per Farm, Excluding Households			
Balance sheet:				
Assets, Jan. 1	2,324,303	764,718	203,106	408,219
Debt, Jan. 1	617,866	138,748	22,820	78,548
Equity, Jan. 1	1,706,437	625,970	180,286	329,671

Source: USDA.

Greater specialization raises some crucial questions about the type of Government involvement to support prices and incomes. Programs for cash grain producers that significantly raise the price and reduce the supply can have adverse effects upon the prices paid for feed and the net incomes for livestock and poultry producers who buy grain and soybean meal.

Farm and nonfarm income

In most years before 1960, the per capita disposable income of the farm population was half or less than the nonfarm population. After 1960, the gap between farm and nonfarm per capita income gradually narrowed. In 1972, per capita farm income was equal to 78.8 percent of the nonfarm population, but in 1973, it was 102.1 percent, a record high. Since 1973, farm income per capita has varied between 78 and 98 percent of nonfarm.

Although in recent years farm income per capita has remained below nonfarm, the wide gap that existed before 1960 has disappeared. With farm and nonfarm per capita income closer to being equal, the question will arise as to whether the extensive income support programs for the farm population are still needed.

AGRICULTURAL TRADE TRENDS AND ISSUES

Short-term outlook

The value of U.S. agricultural exports after reaching a record $43.8 billion in fiscal 1980/81 declined for 2 consecutive years to $34.8 billion in 1982/83. The forecast is that the value of U.S. agricultural exports in fiscal 1983/84 will rise to around $39 billion which approximates the 1981/82 level.

The projected recovery in export values is due entirely to higher prices as the total volume of farm exports is forecast to fall 3 percent to 140 million tons. Among the major export categories only wheat and feed grains are expected to benefit from increased ship-

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ments whereas rice and cotton shipments are likely to remain about the same level.

Regarding the former commodities U.S. wheat exports may benefit from a favorable wheat/corn price ratio prompting wheat imports for feed. On the other hand, a shortage of feed grain supplies until spring of 1984 should bolster foreign demand for U.S. feed grains. Beef, pork, variety meats, poultry meat and horticultural products exports will likely register some gains over a year earlier (table 2.)

The volume of U.S. soybean, soybean meal and soybean oil exports are expected to drop sharply owning to their higher price. Meal use in the European Community in particular is likely to be reduced because feed compounders will find it profitable to shift to grains and nongrain feed ingredients. Importers of U.S. soybean oil will be encouraged to substitute lower priced palm oil and other vegetable oils for soybean oil.

TABLE 2.—U.S. AGRICULTURAL EXPORTS: VOLUME BY COMMODITY, FISCAL YEARS 1981–84

[In millions of metric tons]

Commodity	Fiscal year—			Forecast 1984
	1981	1982	1983	
Wheat	42.247	44.609	36.696	37.5
Wheat flour [1]	.940	.721	1.482	1.1
Coarse grains [2]	69.383	58.179	53.769	55.6
Corn [1]	59.367	49.608	47.105	47.6
Feeds, ingredients, and fodders	5.820	6.007	6.991	6.7
Rice	3.172	2.911	2.276	2.2
Soybeans	19.972	25.477	24.522	19.6
Soybean cake and meal	6.149	6.266	6.449	5.2
Soybean oil	.739	.941	.919	.7
Sunflowerseed	.301	.103	.229	.2
Sunflowerseed oil	1.426	1.542	1.363	1.0
Other oilcakes and meals	.441	.289	.239	.2
Beef, pork, and variety meats	.386	.398	.384	.4
Poultry meats	.395	.314	.251	.3
Animal fats	1.536	1.497	1.431	1.4
Tobacco	.252	.254	.254	.2
Cotton and linters	1.264	1.556	1.209	1.2
Horticultural products	3.405	3.138	3.041	3.1
Other	4.508	3.666	3.273	3.4
Total	162.337	157.868	144.769	140.0

[1] Excludes products.
[2] Includes corn, oats barley, sorghum, rye, and products.

Source: U.S. Department of Agriculture, ERS, "Outlook for U.S. Agricultural Exports," Washington, D.C., Oct. 31, 1983, p. 2.

Outlook for remainder of the 1980's

As in previous periods, U.S. agricultural exports in coming years will be affected by: (1) World economic conditions; (2) supplies in main importing and exporting countries; (3) trade policies of importing and exporting countries; (4) availability of foreign exchange; and (5) competitiveness of U.S. farm commodities.

World economic growth in 1984 is projected to be about 3–3.5 percent and that of the industralized countries 2–2.5 percent. The pace of Japan's economic recovery, in real terms, will probably be faster than in other industrial countries, averaging about 3.7 percent. In

the developing areas, the Asian countries are seen to achieve the highest growth rate, 5 percent, followed by Africa/Middle East with a 4–5 percent increase. The Latin American economy as a whole is likely to expand only marginally.

The strength and duration of the current world recovery is questionable. Even the pace of U.S. economic recovery may slow somewhat in 1984 due to the huge Federal deficit and possible adoption by the Federal Reserve Board of an anti-inflationary monetary policy.

The high level of U.S. interest rates is retarding economic recovery and growth in the United States and in the industrial world. High costs of borrowing discourages business investment needed to sustain growth. The European countries have complained for 2 years now that high real interest rates in the United States and the ensuing high dollar are having a sharply adverse impact on their economies. High interest rates also contribute to raising the interest burden on all countries whose external debt is denominated in dollars.

Indications are that income growth rates in the second half of the 1980's will likely lag behind those of the 1970's and unemployment rates may not decline much below the 8 percent average of 1983. Thus a generally weak economic growth in the developed region does not augur well for a strong growth in import demand.

The prospects for growth in the export earnings of the developing countries may be similarly weak. Many of the middle-income developing countries are deep in debt. So the extra export earnings they get from higher primary commodity prices are used to service debt rather than to buy new machines and food from abroad. Shortages of foreign exchange, for example, has forced Mexico and Brazil to reduce demand for agricultural imports. At the same time, the fall in the international price of oil is depressing demand from oil-exporting countries. Their share of world imports declined from a peak of 15 percent in 1980 to 12 percent in 1982 and is expected to diminish farther in 1983.

Import restrictions by developed countries hits debtor countries especially hard. According to estimates by the General Agreement on Tariffs and Trade (GATT), 30–40 percent of exports from oil-importing developing countries are subject to some form of restraint in the markets of rich countries. These restrictions on imports in the United States, Europe, and Japan are provoking debtors to impose controls on imports of their own.

Agricultural trade policy issues facing the United States

In order to assure that U.S. agricultural products will share in the growth of world, agricultural trade efforts need to be made to: (1) Improve the competitiveness of traditional U.S. agricultural exports; (2) expand the U.S. share of world high-value products trade; and (3) press for trade liberalization in general, and in particular, for greater access to European Community and Japanese markets.

Improving the competitiveness of U.S. farm products in international markets may involve several measures including: (1) Keeping domestic farm prices in line with international market prices; (2) bringing about a lowering of the exchange value of the dollar; and (3) greater use of export credits. A strong dollar will probably

continue to dampen overseas demand for U.S. exports much of 1984. Between the last quarter of 1980 and September 1983 the dollar appreciated by 46 percent in nominal terms and 40 percent in inflation adjusted real terms against a weighted average of currencies of the other major industrial countries.

Studies prepared by the Federal Reserve Board's staff show that the effect of the dollar's real appreciation since the fourth quarter of 1980 led, by mid-1983, to a 14 percent fall in the volume of U.S. merchandise exports and a 15 percent rise in the volume of merchandise imports. The studies also show that by mid-1983 the level of the U.S.' real GNP was 1 percent lower than it would have been were it not for the dollar appreciation. But of course there are offsetting elements. The appreciation of the dollar has had some positive impact on the U.S. economy by helping to reduce the U.S. rate of inflation by about 1.5 percent at an annual rate over the period.

Export credit is most likely to play an important role in meeting greater competition from other exporters who apply questionable trade practices to increase their market shares at our expense. U.S. wheat, feed grains, poultry, and vegetable oil exports in particular may benefit from more energetic export credit programs. The target markets are the Middle East, North Africa, and Eastern Europe.

The possibilities of increasing exports to the European COMECON countries at the high levels of the 1970's is impeded by the necessity of these countries not to increase the hard currency debt any further, by their hard currency shortages, and by the poor export prospects in the Western markets. As in the 1970, CCC credit guarantees will be needed to promote U.S. exports in Eastern Europe.

Although the minimum level of U.S. sales to the U.S.S.R. under the new grain sales agreement (October 1, 1983–September 30, 1988) is higher than during the previous agreement (9 million tons vs. 6 million tons), it is not likely to have a substantial impact on total U.S. grain exports in the near future. To a large degree grains from different sources are highly substitutable.

At a given level of worldwide demand and supply, larger Soviet purchases from the United States will result in smaller Soviet purchases from other sources. This in turn will increase the exportable supplies of other countries and will intensify competition for markets outside the U.S.S.R. The result may well be smaller U.S. shipments to third country markets. Consequently, total U.S. grain exports may not increase significantly as a result of the grain agreement.

Japan is the largest single importing country of food in the world with 42 percent of its agricultural imports from the United States. Yet, Japan's restrictions on such imports (quantity, tariff, licensing, varible levies) has precipitated major conflicts with this Nation that continue to be a priority concern in our future trade policy.

The EC is not only the world's largest importer of agricultural products but also its second largest exporter. Its highly interventionist trade policy affecting many U.S. agricultural exports is a source of increasing tension between the two trading partners and a second priority concern for future U.S. policy development.

INTERNATIONAL IMPLICATIONS FOR DOMESTIC AGRICULTURAL POLICY

The growth in the absolute and relative importance of export markets to U.S. agriculture is well documented, but its implications for domestic agricultural policy are apparently well understood. The nature of the linkage has important implications for the well-being of the farm sector. As world recession and stagnant U.S. market share combined to slow export growth, adverse impacts on the domestic agricultural economy were felt. Given the significance of exports and the sensitivity of the farm economy to changes in their level, it is worthwhile to consider whether domestic agricultural support policies promote the position of the United States as an exporter.

U.S. agricultural policies are predicated on the belief that the aggregate demand for food is not very responsive to changes in price (is inelastic). Consequently, policies which restrict supply and raise price also raise farmer's revenues. However, as the elasticity of demand increases these policies become increasingly ineffective in maintaining revenues. The growing influence of exports may well have resulted in the increasing price responsiveness of the total demand faced by American agricultural producers. Therefore, the basic design of existing policies may have been rendered obsolete by the structural changes in the market for American agricultural products.

At the same time that policies have become increasingly ineffective as a means of income support, they have further contributed to the erosion of U.S. market share. The willingness of the U.S. Government to hold domestic price (and returns to producers) above market clearing levels (possible through the combined effects of acreage reduction programs and subsidization of the farmer owned reserve) creates an opportunity for other exporters to undersell their American competitors while increasing production and exports. The actions of U.S. competitors suggest they believe demand for agricultural products to be more price responsive than do U.S. policymakers. In grain markets, Argentina, for one, has certainly availed itself of this marketing opportunity.

The solution to this dilemma may require a discontinuous change in the operation of agricultural policy, which basic design has prevailed since the New Deal legislation of the 1930's. The focus on the role of price as the mechanism through which Government policies provide support to the farm economy should be completely abandoned. Income could be supported directly, perhaps through an insurance scheme. In any event, allowing price to vary with domestic and world market conditions necessarily removes the insulating barrier between U.S. farmers and the export market and undercuts the advantage enjoyed by U.S. competitors which is attributable to U.S. policy. However, such a change in the means by which support policies operate may upset the benefits currently enjoyed by particular groups and interests and, moreover, may make their costs even more visible. Whether or not such a change actually reduces Government spending on the agricultural sector depends on the alternative mechanisms selected as replacements. Furthermore, a switch to programs which focus on income directly as the target variable forces the issue of whether agricultural poli-

cies are meant to increase farmers' incomes or merely stabilize them around market trends. At the same time, the identity of the recipient of farm aid (the rural poor, the "hobby" farmer, the family corporation) would become more obvious. For these reasons, changes in support policies will likely have far-reaching political and economic repercussions.

With continuing advances in productivity likely, the prosperity of U.S. agriculture will depend on the development and exploitation of new markets which will inevitably be those overseas. Domestic support policies should be designed to facilitate, not hinder, this expansion. Moving toward an improved competitive position in the world market would be the main means to accomplish this objective. Just as important, U.S. agricultural policy should recognize that a lack of effective demand on the part of developing nations is ultimately the greatest barrier to U.S. market expansion. American policies which promote development of domestic economies simultaneously augments their potential as export markets. There is no reason to believe agricultural development in these countries represents a threat to the expansion of U.S. export markets. U.S. agricultural policy for the foreseeable future requires an integration of the United States into the world market on a commercial and perhaps a concessional basis.

SELECTED ALTERNATIVE POLICY DIRECTIONS

By the time the Agriculture and Food Act of 1981, which is the current statutory embodiment of our price and income policy, expires on September 30, 1985, the public must decide what policy should follow, if any. This particular current Treasury burden, the present importance of the international market, and the volatile economic well-being of the farming sector.

If the past 50 years of agricultural policymaking yields any lesson for the future, it is that the 1984–85 policymaking cycle will begin with where present policy is, the 1981 act, and change it as deemed needed. However, in reality, many options and alternative policy directions are possible. It is the public decisionmakers that must find the desired direction or proper compromise among the several. Thus, to recognize that there are policy alternatives and to examine their likely consequences is not only in the spirit of a democratic political system but necessary for continually improved agricultural and food policy.

Whatever future price and income policies come forth could be refutations of essentially all present public agricultural and food policy, or it may be simply familiar packages of policy instruments slightly retuned. Alternatively, surprising program innovations might appear to better ensure price stabilization, income security, food adequacy, trade reliability, and fiscal responsibility. These could involve such principles as insurance, targeting of programs for particular regions or commodities or producers, declining compensation with size, self-help institutions, and indexing of benefits to various measures of economic well-being. Following are alternative agricultural price and income policies, admittedly selected to exemplify the range of choices rather than provide an exhaustive inventory:

(1) Gradual phaseout of all support policies, payments, production controls, and trade interventions, letting domestic private market decisions determine production, prices, incomes, and trade with other nations, who in turn, continue to pursue their own national policies. This approach would place the responsibility on individual farmers, and on their cooperatives and other agribusinesses upon whom they depend, to carry the risks of market instability, inventory adjustment, and financial viability. Any costs attached to these functions must of course be borne by the producers and the consumers of their products. Domestic and foreign consumers alike would reap the eventual consequences of such market operation, whatever they may be. The Government would be relieved of the frustrations of present policy implementation and the Treasury of the burden of program administration and transfers. Such a policy would set this Nation's policies even farther apart from those of other nations, be they agricultural importers or exporters.

(2) Supplementation of a gradual phaseout of present price and income policies, with carefully structured techniques to augment the market system. These could include publicly assisted national income insurance and futures markets to facilitate better private risk bearing, a public recourse loan program to smooth out farm prices during the marketing year, and a minimal farmer owned reserve recourse loan program to provide the desired level of national food and trade security. This approach would cushion the total risk bearing by farmers, occasioned by the first alternative above, with this minimal and strictly limited public intervention. It could also enhance the development of and experimentation by farmers with marketing options more common to the nonfarm business community. The Treasury would shoulder some minimal burden, while the consuming and trading public would be affected by any changes in the market stability or by any lowered costs or risk bearing.

(3) Continuation of the primary provisions of the 1981 act, modified with "fine tuning" of certain provisions found wanting, due either to their substance or to the administrative discretion exercised in their implementation. Candidates for such policy incrementalism are:

(a) Designation of a maximum as well as minimum reserve to encourage its stabilizing and security objectives while discouraging its use for farm price and income raising objectives.

(b) Indexing price supports to a recent multi-year market price average to smooth the market variability but avoid significant interference with trade and avert accumulation of Government stocks.

(c) Indexing of target prices to recent multi-year average nonland costs of production to provide an income "safety net" with payments flowing directly—and exposed—from the Treasury.

(d) Extending of payment limitations to kind as well as monetary transfers, and use of a declining schedule for all larger permitted payments.

(e) Linking of all price and income program benefits to soil conservation and nonpoint sediment water pollution control performance on all land in the farming unit.

The results of this approach would be similar to the present policy tempered by slightly less potential market interference, less massive Treasury transfers to individual producers, more costly achievement of any given production control objectives, but greater achievement of multipurpose public objectives. Economic well-being of farmers would be more dependent upon public policy than the previous three alternatives, and their risk bearing shared with that public through the market interventions and the Treasury burden.

(4) Expansion of public market intervention through replacement of voluntary production control with compulsory compliance following producer referenda supervised by a new national marketing board, through greater reliance on price supporting borne by consumers in lieu of the Treasury, through aggressive negotiation of international market agreements to stabilize shares of foreign markets, and through the use of the necessarily associated import controls. This approach bestows more market power upon farm producers than the other options, and protects their returns in a domestic market with only secondary attention to trade dependence. In so doing, this Nation's agricultural policy would converge with that of other countries of the world.

Finally, price and income policies might be designed as "change instruments" on behalf of the public to bring about conservation of land or water, population dispersion, nutrition improvement, income redistribution, family farm structure and control, enterprise shifts, environmental quality, desired trade flows, and others.

When public policies are viewed as instruments, as institutional creations, or as responses to societal demands, rather than as rigid goals, scientific norms, or as embodiments of ideology, one can envision infinite possibilities for their future use. The challenge to all those helping to shape the public agricultural and food policy for 1985 is to have as many options remain open as long as possible and to achieve public understanding of both the alternatives available and their probable consequences.

CONCLUDING COMMENT

If the U.S. Senate Committee on Agriculture, Nutrition, and Forestry is to help design omnibus agricultural and food legislation in 1984–85 to serve the public needs of this Nation in the remainder of the decade of the 1980's, it must be sensitive to the economic changes underway in its agricultural sector, to the dramatic changes in international agricultural trade, to the fundamental implications of this new trade dimension for our domestic policy, and to the various alternative policies out of which a new policy must be forged. These are the very issues to which this paper is addressed.

HAS OUR PRESENT AGRICULTURAL POLICY PROCESS FAILED?

(By A. Desmond O'Rourke [1])

Recent events have raised a question in many minds about the ability of the U.S. Government to formulate a consistent and effective agricultural policy. Remedies range from (1) redoubled efforts to find more effective policies, to (2) leaving agriculture to sink or swim unaided, and (3) varied alternatives between these two extremes.

Much of our current agricultural policy legislation either derives from actions taken in the 1930's in response to the Great Depression, or reflects incremental changes in 1930's policies to meet changing needs. Much of the philosophy underlying Government attempts to aid farmers also derives from the 1930's situation when farmers were numerous, small, financially drained from almost 15 years of unfavorable market conditions, and deserving of special attention from the architects of economic recovery.

To better determine what action might improve agricultural policy and in turn benefit the agricultural industry it is necessary to find some way of:

(1) Evaluating the present situation,

(2) Exploring options for the future, and

(3) Determining the intellectual, administrative, and legislative role in making those options work.

REVIEWING THE PRESENT SITUATION IN U.S. AGRICULTURAL POLICYMAKING

In order to keep the discussion within manageable proportions it is necessary to generalize about the recent experience of U.S. agriculture and the impact of agricultural policy. However, it is vital to remember that U.S. agriculture is a vast, diversified, rapidly changing, multibillion dollar industry, not easily described in summary averages or percentages.[2] While one can cite the decline in total U.S. net farm income or the ups and downs of individual price series, farmers in one region or crop or debtor class may prosper while others suffer, and vice versa.

However, insofar as it is possible to generalize, one can say that U.S. agriculture has been disgruntled with its lot since the heady days of 1973–74. The major 4-year omnibus farm bills have not ap-

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[2] For example, profitability in any season varies by region, size of farm, level of borrowing, product produced, etc. Averages can conceal more than they reveal about various parts of agriculture.

peared to reassure farmers that they could redress farmers' woes. Congress sought to overturn the 1973 act with the emergency farm bill vetoed by President Ford in 1975. President Carter's signature on the 1977 act was scarcely dry when the American Agriculture Movement staged a series of protests including an abortive farm strike which led to amending legislation in 1978. The 1981 act was replaced within a year by the ingenious payment-in-kind (PIK) program.

No wonder prominent Congressmen were openly suggesting that the present programs have failed, and that our options have narrowed to:

1. Limping along with the present inadequate programs,
2. Restrictive mandatory programs, or
3. Ending Government programs altogether.

WHY HAVE ANY AGRICULTURAL POLICY?

Increased government intervention in agriculture can be justified on three related grounds:

1. That the actual situation without intervention or with limited intervention falls short of the desired situation;
2. That government thinks it can close the gap between desired and actual; and
3. That benefits of the policy initiative exceed its costs.

The actual situations of concern (the goals of agricultural policy) are numerous and not always consistent. However, among them one can probably include:

1. Reasonable income for farmers, with "reasonable" defined in terms of absolute or relative level, or stability.
2. Plentiful food for consumers, a phase which would include food of "acceptable" quality at "reasonable" prices.
3. Efficient use of resources. For example, in wartime, if the Nation is to have enough of both guns and butter it may need to utilize its land, labor and capital most effectively. In a cold war environment or even in peaceful competition to meet its citizens' rising expectations, a government will also want to use its resources most efficiently.
4. Competitiveness in exports. With exports increasingly important to agricultural producers' incomes, and the Nation's ability to purchase petroleum and other foreign goods so dependent on agricultural exports, the competitiveness of those exports becomes critical to agriculture and the Nation's economic health.

If Government intervention is to be justified under any of these goals, Government must believe that it can close the gap between present and desired levels of achievement, and that it can generate more benefits than costs from the intervention. Unfortunately, while one may specify the actual situation in any case, the desired situation must remain as variable as citizens' moods or whims and just as difficult to measure precisely. Thus the size of the gap between desired and actual depends on one's point of view. This has not been a deterrent to modern governments which in general have assumed that inadequacies exist and that their actions to close shortfalls in goals are both justified and effective.

BASIC METHODS USED IN AGRICULTURAL POLICY

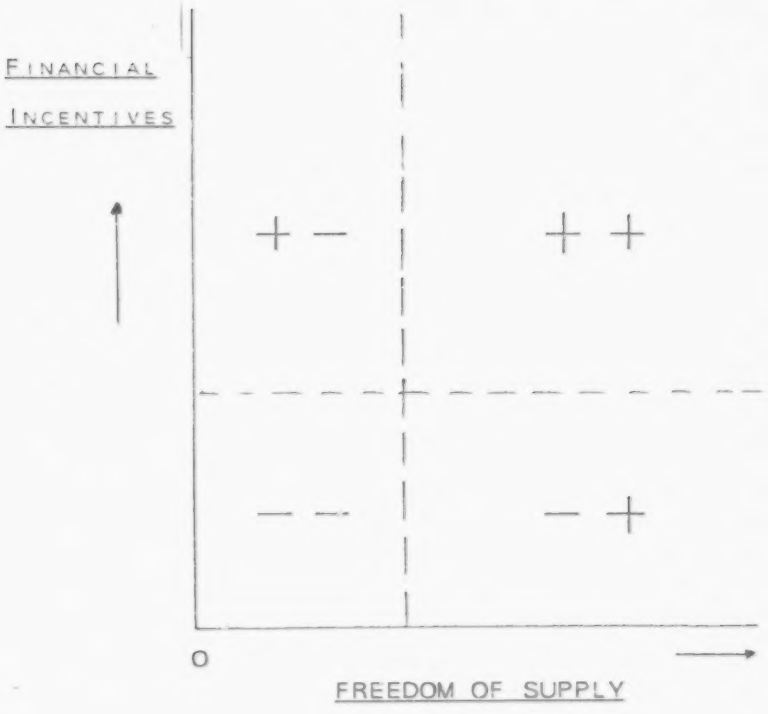
Most attention of agricultural policymakers has been focused on the first goal above, improving prices and incomes to farmers. However, there has been a fundamental contradiction in the basic methods used to achieve income goals.

1. Adjusting the volume marketed. The intent of these measures is to raise price by reducing supply. Included are acreage controls on production, marketing quotas, storage incentives and import restrictions.

2. Financial incentives to participants. These include regular nonrecourse loans, deficiency payments (subsidies), guaranteed prices, export subsidies, and so forth.

Unfortunately, most combinations of volume adjustments and financial incentives either neutralize each other or have a positive impact on production (figure 1). We have plotted the farmer's relative freedom of supply on one axis and the level of Government financial incentives on the other axis. Clearly, when farmers have little or no freedom of supply (the closer they are to mandatory controls) and little or no financial incentives, both policies will have a negative influence on output, hence the two negative signs in the lower lefthand quadrant. If financial incentives are high and freedom of supply low (upper left quadrant), the first policy will have a positive impact on production, the second an offsetting negative impact. Likewise in the lower right quadrant, the policies will conflict. In the upper right quadrant, increased freedom of supply and higher financial incentives will both stimulate output.

FIGURE 1: POSITIVE OR NEGATIVE IMPACT ON AGRICULTURAL OUTPUT OF SELECTED POLICY COMBINATIONS 1/



1/ Left symbol in each pair shows impact of financial incentives, right symbol shows impact of relative freedom of supply.

Government has had great difficulty operating in the lower left-hand quadrant because very strict (or mandatory) production controls are unpopular so that financial incentives have had to be set high enough to encourage sufficient farmer participation in voluntary production controls. Thus, Government programs either tend to give farmers offsetting signals or may actually stimulate production.

Similar severe inconsistencies arise in the methods of achieving the other goals listed. However, perhaps more serious are the inconsistencies between goals. For example, application of acreage controls or quotas on an historical base, lessens the efficiency of resource use and reduces export competitiveness. In contrast, permitting producers to be more competitive in exports would prevent the achievement of income goals for the less efficient producers. Government thus finds itself using conflicting methods to achieve often

inconsistent goals. In practice, the squeaky wheel gets the grease. If farmers' incomes are seen as the most pressing problem policies tip in that direction, and if that results in loss of export competitiveness, policy tips in the latter direction.

DIFFERENT FARMERS HAVE DIFFERENT NEEDS

Compounding the problems of Government in helping farmers is the fact that different farmers have different attributes and different needs. For example, in 1981 there were only 1 percent of farmers with sales of over $500,000 but these farmers accounted for about 30 percent of U.S. cash receipts and about two-thirds of U.S. net farm income. In contrast, 87.8 percent of all farms had sales of less than $100,000, accounted for about 30 percent of U.S. cash receipts, but on average had negative net farm income.

When the source of income is broken down by farm and nonfarm a further dimension emerges (table 1). For farms in the sales classes $40,000 and up, net farm income was positive and rose as sales rose. All farm classes with sales of less than $40,000 had losses (though modest) on their farming operations. In general, the lower farm sales, the higher the average off-farm income. One interpretation of these data is that three-quarters of all farmers lost money on their farm operations and were forced to supplement their income by off-farm work. However, an equally likely scenario is that for many, off-farm employment was their main activity, the farm business was a means of reducing tax liability, and in addition provided residential, community or other satisfactions.

Clearly, the needs for price and income supports, and the effects of such supports would be different for the upper, middle, and lower farm sales classes. As numerous studies have shown, including Bonnen, Schultze, Lin et al., most of the benefits of traditional price support programs have gone to the larger farmers whose income is already above the nonfarm average. In the case of income level, Government has not been very successful in closing the gap between actual and desired.

TABLE 1.—U.S. FARM INCOME BY SALES CLASSES AND INCOME SOURCE, 1981

Sales class	Farm numbers (thousands)	Income by source		
		Net farm	Off farm	Total
Greater than $500,000	25	$518,365	NA	NA
$200,000 to $499,999	87	45,666	NA	NA
$100,000 to $199,999	186	15,867	NA	NA
Greater than $100,000	298	66,790	$13,772	$80,562
$40,000 to $99,999	396	3,813	8,543	12,356
$20,000 to $39,999	278	−880	10,165	9,285
$10,000 to $19,999	286	−1,022	14,021	12,999
$5,000 to $9,999	335	−988	18,418	17,430
$2,500 to $4,999	332	−1,389	22,220	20,831
Less than $2,500	511	−982	22,425	21,443
Less than $100,000	2,138	−121	16,474	16,353
All sales classes	2,436	8,042	16,145	24,180

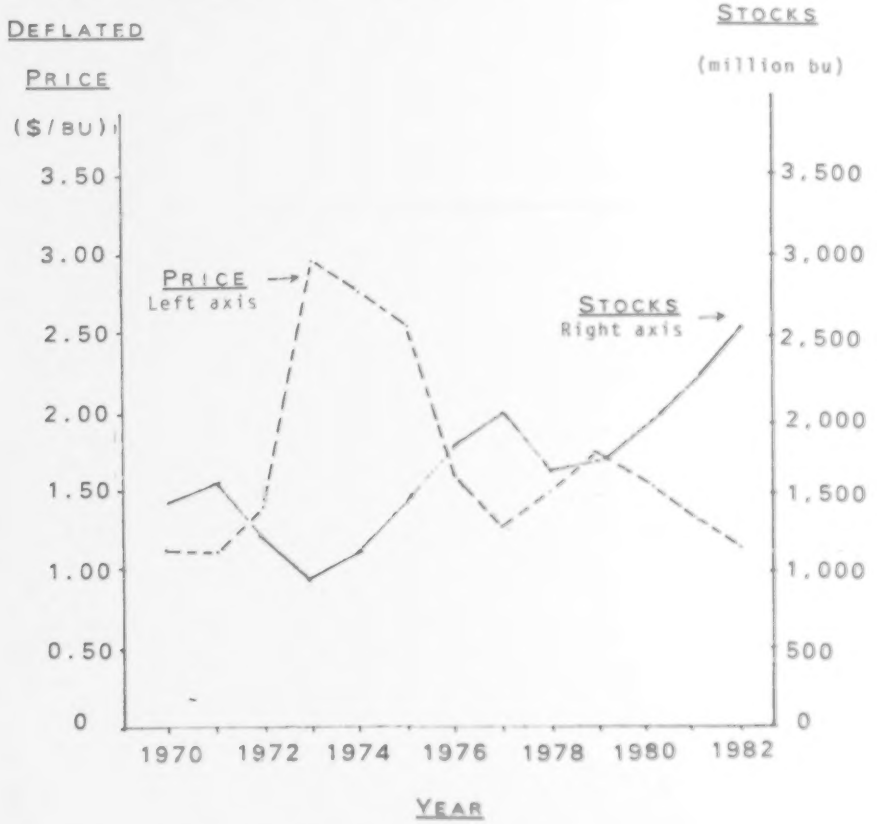
Source: USDA, ERS. Agricultural Outlook, October 1982, p. 11.

DO GOVERNMENT PROGRAMS INCREASE THE STABILITY OF PRICES AND INCOMES?

Most students of agricultural policy will admit that Government programs have often failed to deliver higher prices or incomes. However, some still maintain that a Government hand on the wheel, adjusting loan rates, managing reserves, negotiating long-term trade agreements, and so forth, buffers the farmer from excessive swings in prices and incomes.

Evaluating the truth of this claim would in itself be a very large project. However, the preliminary indications do not offer much support for this view. For example, if we look at wheat stocks and prices in the period since 1970, it is clear that the two are inversely related and have fluctuated by 150–200 percent, from their low point to their high point (figure 2). Many factors contributed to the sharp runup in prices and drawdown of stocks in 1972 and 1973.

FIGURE 2: U.S. WHEAT, YEARLY AVERAGE FARM PRICES (DEFLATED), AND TOTAL STOCKS, DECEMBER 31



While world supply and demand conditions were probably the primary movers, the U.S. Government contributed by its general policy of devaluing the dollar and freezing the price of gold and by

its first major grain deal with the Soviet Union on the heels of efforts to cut wheat production the previous 2 years. The Canadian Government compounded the problem by cutting their wheat acreage in half between 1971 and 1972.

The recovery in production, build up in stocks, and sharp decline in price in 1975 and 1976 followed U.S. Government exhortations to plant fence row to fence row. The setting up of the long-term grain reserve under the 1977 act, led to the growth of grain reserves to the point where the Government in 1982 turned to the PIK program in an effort to undo the depressed prices to which those reserves had contributed. It would appear that Government can predict the future no better than individual citizens and that both the 4-year pronouncements of Congress and the annual program interpretations of the administration are as likely to compound as to offset farmers' errors in judgment.

A comprehensive evaluation of Government farm policies would consider the success of each policy in closing the gap between actual and desired conditions, it would take into account the achievements relative to the exogenous forces working against each policy (such forces as the energy crisis) and it would weigh the costs to taxpayers, consumers and farmers of policies followed. No such evaluation is attempted here. However, for subperiods since 1969, the author presents his personal scorecard of the effectiveness of government in achieving the four major goals discussed earlier.

I have used the most basic rating, either satisfactory (S) or unsatisfactory (U) (figure 3). It is noteworthy that no goal was satisfactorily achieved in all four subperiods. Consumer interests have tended to fare better than farmers. Export competitiveness fared well after 1972, but has not been helped by rising loan rates and reduced supplies due to the farmer-owned reserve program and the payment-in-kind program. Efficiency of resource use tends to be hampered when government regulates production or marketing by controls, quotas, or embargoes.

FIGURE 3.—POLICY SCORECARD FOR SUBPERIODS IN U.S. AGRICULTURE, 1969–82

	1969–72	1973–75	1976–81	1982
1. Farm income:				
Level	U	S	U	U
Stability	U	U	U	U
2. Consumer interests	S	U	S	S
3. Efficient use of resources	U	S	S	U
4. Export competitiveness	U	S	S	S

S = Satisfactory; U = Unsatisfactory.

THE COMPOSITION PROBLEM

Perhaps if the United States was an isolated, closed economy, one could find some compromises between goals. However, the United States has become deeply interlocked with agriculture in other countries as a result of its massive imports and exports of agricultural products. As discussed in the previous section, production plans in Canada, Australia, Argentina, Western Europe or the

Soviet Union are unpredictable and may offset or compound trends in U.S. supply.

However, it is in the area of protecting farmers' prices and incomes that the composition problem leads to the most quaint results. For example, the U.S. Government provides a subsidy (deficiency payment) to its farmers on all wheat sold, including the very large share of the crop exported. The U.S. taxpayer foots the bill but the U.S. consumer does get wheat somewhat cheaper than he otherwise might.

However, when the Soviet Union buys U.S. wheat, their consumers too get wheat somewhat cheaper than they otherwise might. U.S. taxpayers are in fact providing a subsidy to Soviet consumers.

If it seems curious that the United States is subsidizing its ideological enemy, what is even more curious is what our ideological "friends" do to us. When our wheat (partially subsidized so as to lower its price) reaches the shores of Japan, the Japanese slap on a hefty wholesale tax to make our wheat dearer to the Japanese consumer and to support their domestic rice program in opposition to our wheat. The European Community achieves a similar result by use of a variable levy which is essentially an import tax to prevent our wheat selling below their arbitrarily set domestic price for wheat. Like the Japanese, the Europeans penalize their consumers and our exporters to support Community farmers. In addition, to put salt on the wound, they use levy moneys to subsidize exports of their wheat in competition with ours in third countries.

In essence, if other countries do not like the effects of any U.S. agricultural policy, they can take steps to exploit or neutralize that policy as the Russians, Europeans, Japanese and others do. In the case of our latest initiative, the payment-in-kind (PIK) program, experience tells us that other countries, whether customers or competitors, are not likely to follow our signal and cut supplies but rather will adjust their policies so they can maximize their advantage and minimize any damage from PIK.

In evaluating any existing U.S. agricultural policy, therefore, one must take account of the reactions of our trading partners. Likewise, in formulating any new policy, the United States must be cognizant of the likely actions and reactions in other countries. In a centrally planned country this may mean the reaction of government. In democracies such as Western Europe and Japan it may also be necessary to judge the economic and political reaction of various interest groups and their pressures on government as a result of each U.S. policy initiative. For example, threats of punishing the European Community for certain aspects of its common agricultural policy may rally support for that policy rather than weaken its political base.

WHERE ARE FORWARD-THINKING SOLUTIONS TO BE FOUND?

Given the difficulty of designing effective policies it is not surprising that the results of agricultural policies are as often unsatisfactory as satisfactory, even to proponents. Judging from the debate over agricultural policy in the last decade, farm organizations have little new to offer.

The Carter administration held a number of cross-country tours to elicit input. A series of seminars on small farm problems showed that many farmers that the USDA defined as large considered themselves small, and that small farmers shared problems and concerns about natural hazards, prices, debt and uncertainty similar to all farmers. The great "structure" debate in which Secretary Bergland injected so much personal effort produced not the new, creative ideas the Secretary asked for, but the same old clichés.

Perhaps it is time to face the fact that there are not solutions to agricultural policy problems, only options, each of which promise different, but partial, answers and an accompanying bundle of unpleasant side-effects. In agricultural policy there is not likely to be an effective sugar-coated pill. Any strong medicine will have an unpleasant taste.

I will review only two options here:

1. Strengthening present Government programs, and
2. Gradual elimination of Government programs.

Society may well wish to choose some option in between, but these extremes will show more clearly the contrasting needs and effects of different options.

FUTURE POLICY OPTION 1—IMPROVED GOVERNMENT PROGRAMS

It can be argued that present Government programs fail because society does not commit enough resources to them or give them sufficiently centralized direction. Through improved information, computer modeling, and firmer planning, control and resolution by government policies could be devised that would work. We would get the result we intended. Many influential groups in society believe that more information is better, on weather, crops, international politics, sunspots and any other phenomenon that might affect U.S. agriculture. Government, universities, foundations, and think tanks have made an industry out of weaving that information into systems of ever more complex computer models. The computer in turn is the ideal tool for those who believe that the more detailed the plan for an economy the more effective planning can be. And since the planners have so much superior knowledge of the economy than private individuals it will be better, it is argued, if they be given authority to control as many facets of the economy as possible. To make that control work, when the unpleasant side-effects start flowing alongside the desired goals, the controller(s) need the resolute support of government—not a government which changes tack or caves in before organized protest.

Clearly the approach in option 1 depends ultimately for its success on the resolution of government in authorizing and supporting the discipline necessary. With its authoritarian structure (the President at the top, cabinet officers next, agency chiefs next, and a consistent chain of command) it would appear that the executive branch of the U.S. Government might show the needed resolve. However, the portents are not good. For example, the Reagan administration, which has been more insistent on keeping preelection promises than most, has been signally unsuccessful in doing so in agricultural policy. In their approach to the 1981 farm act, "The farm philosophy of the Reagan administration," Infanger et al.

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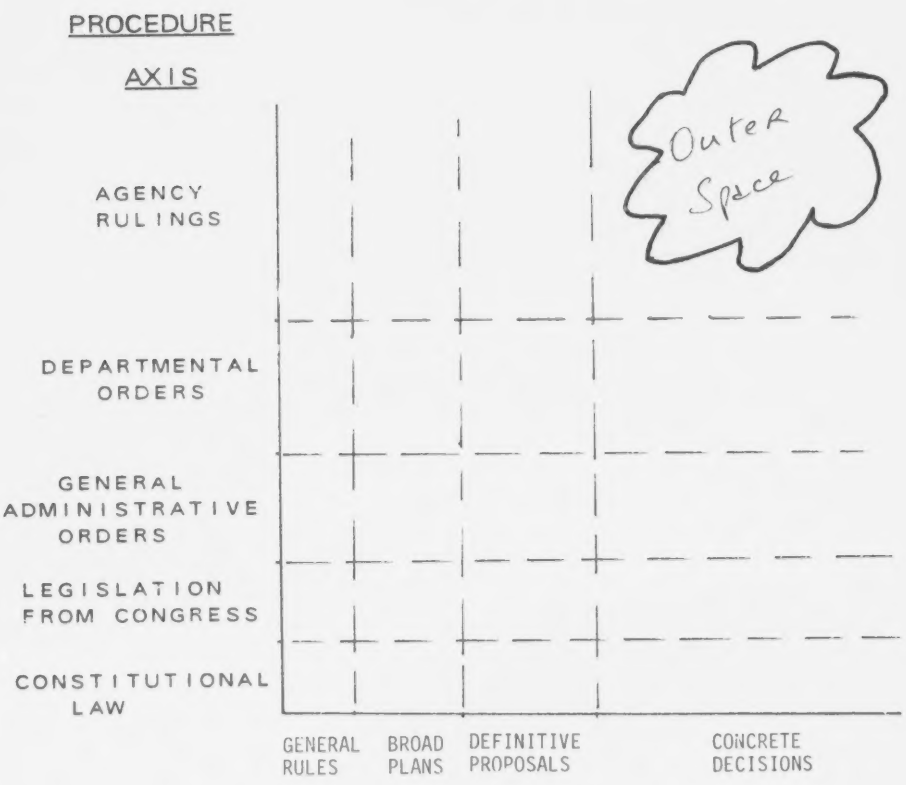
wrote, "centered on three objectives: (a) reduction of the role of Government in agriculture; (b) continued emphasis on agricultural exports and on productivity in the agricultural sector; and (c) pursuit of the above objectives at the least possible cost to the Government while maintaining maximum program flexibility." Within a year of passage of the 1981 act, the Reagan administration was supervising the most costly farm program in history and took a step backwards towards more extensive Government involvement with its PIK program which was not likely to boost either farm productivity or exports.

The separation of power between the executive branch and Congress under the U.S. Constitution makes resolution in Government policy all the more difficult. Even in those rare instances where the Presidency and both Houses of Congress are controlled by the same party, the lack of a homogenous philosophy within parties and weak party discipline mean that conflicts and contradictions arise earlier and more often and can be less easily resolved than in the European parliamentary system.

In short a mandatory, all-encompassing, consistent agricultural policy is most likely to emerge in the sort of totalitarian political system that has had little appeal to U.S. citizens. And since the needs of a "strong" agricultural policy are hardly sufficient to merit a major change in the U.S. political system, the agricultural policy that emerges will have to be fitted to the realities of the current political system.

Even if Government support for a mandatory agricultural policy existed, findings from other countries are beginning to question the efficacy of detailed planning approaches to policy. Professor in't Veld, drawing from the experience of the Netherlands describes the interplay of laws and government decisions in modern economies. I have expressed some of Professor in't Veld's insights in diagrammatic form (figure 4). In a less complex society, the behavior of citizens is regulated by fairly general laws and fairly general government rules. As society becomes more complex, government control requires ever more detailed laws and more detailed bureaucratic decisions. More and more frequently citizens find themselves governed by detailed procedures and decisions, in the upper right-hand segment of the graph, which I have affectionately dubbed "outer space." Ironically, in this supposedly more regulated sector the citizen is just as likely to be inadvertently ignoring or breaking a myriad of laws and decisions which only some minor government clerk or some litigous attorney understands fully.

FIGURE 4: INTERPLAY OF LAW AND GOVERNMENT DECISIONS

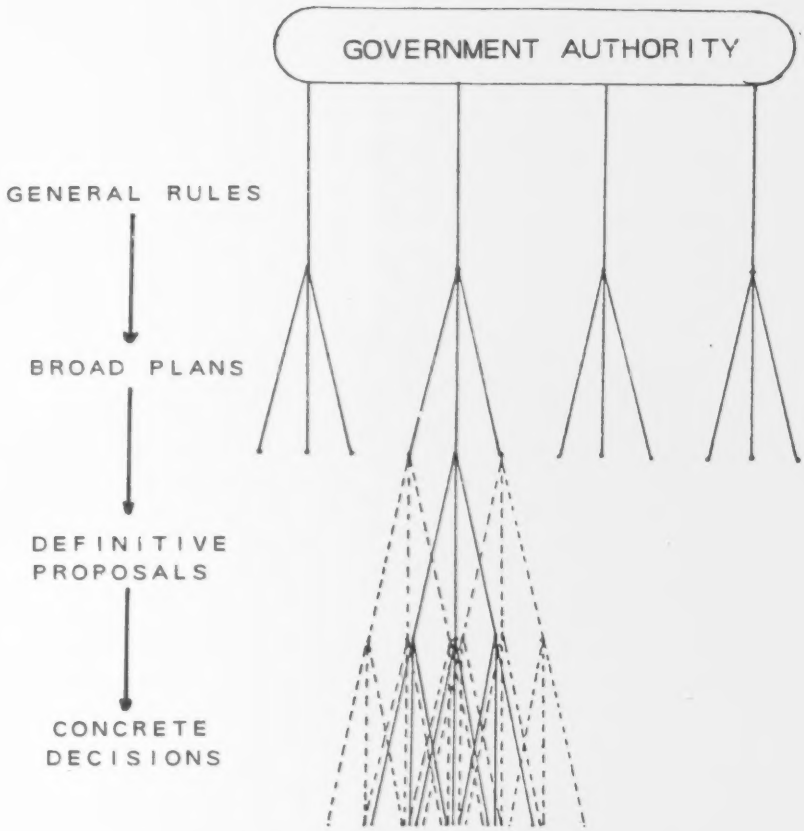


From a practical point of view, as government moves towards more and more detailed decisionmaking the probability, indeed the certainty, of those decisions overlapping or conflicting increases (figure 5) Professor in't Veld concludes "Despite the explosion in scientific knowledge, the ability to control the future has not increased. There is more and more planning, which displaces over systems of influence and monopolizes the foundations of decisionmaking. Despite planning failures a stereotyped reaction consists of more planning in response to disappointments in administration and policy. Beyond a certain point, however, control of the future by means of planning and democracy in a dynamic perspective are mutually incompatible . . . Planning built on rationalism and faith in the future would, in perfect form, destroy the dynamic democratic perspective and become totalitarian."

In the U.S. context, the assumptions underlying public law may often be at variance with the realities of administering that law.

Public law assumes that decisions flow downward through society. Congress passes a bill or the President signs an Executive order and a decision is made. In fact, in most cases decisions are made from the bottom up. For example, it is the combined decisions of farmers that determine if a set-aside program will work, not the Secretary of Agriculture. He can cajole, browbeat, even punish, but cannot decide. Public law assumes government produces outputs, but in fact it is only operational units, whether private or public, responding to government action that can produce economic results. Government can raise rates of taxation but only firms and individuals can generate higher tax revenues depending on their attitude to use of tax shelters or tax avoidance. It is also assumed in public law that the central government controls State government, State controls county and so on in a neat hierarchy. In fact, the different levels of government are mutually interdependent. This factor is less influential in agricultural policy than in health education, welfare and such policies. Agriculture is, however impacted by the law's mandating of common standardized rules applied in situations of great diversity. The government applies the same medicine to different diseases because it would be practically impossible to alter medicine and dosage so each disease will be alleviated to an equal extent. Finally, public law equates authority with power. In fact, in any given case, power resides where it resides. As in the old westerns the sheriff might wear the badge but the desperado was the law around town. Before government can exercise power, it must have it. And in U.S. society, power is widely dispersed.

FIGURE 5: HOW GOVERNMENT DECISIONS PROLIFERATE AS SOCIETY BECOMES MORE COMPLEX



Thus, it would appear that in U.S. circumstances, option 1, a rigidly structured centrally controlled agricultural policy, is contrary to U.S. democratic traditions, is unsuitable where power is dispersed both within government and between government and the private sector, and given the complexity and diversity of agriculture is likely to lead to contradictory and counterproductive decisions.

OPTION 2—GRADUAL ELIMINATION OF GOVERNMENT PROGRAMS

Option 2, gradual elimination of government programs means moving more towards the free market to set both prices and incomes to producers. In a totally free market, loan rates, target prices, grain reserves, export credits, subsidized loans to farmers, and so forth, would be eliminated.

The farmer would be in the same position as most small businessmen. If he chose his site well, produced a good product or service, could sell it on a competitive market at a profit, and had sufficient demand for his product he would prosper and probably seek to expand. If not he would either contract production or move to a business for which he was better equipped. There would be no Uncle Sam to take the sting out of business failure. On the other hand, the manpower and resources that were most efficient in agriculture would be drawn in and the inefficient would drop out. Thus, the free market would reward the good farmers, it would lead to more efficient allocation of resources and would stimulate competitiveness in exports. Consumers would not lose and might indeed gain as expansion by efficient farmers more than offset the production of departing farmers.

The free market would not guarantee the level or stability of farm income. Clearly, a farmer would need more acres of small grains than of a high-value crop to survive in that business. As under the present system, those of inadequate scale or productivity would have a constant struggle to survive. There is no evidence that U.S. Government programs can increase the stability of U.S. farm incomes given the sensitivity of markets to worldwide shocks. However, under the free market, there would not even be a pretense of buffering farm incomes from such shocks.

However, it might be argued that if the United States allows the free market to operate but others do not we will somehow be taken advantage of. Firstly, the present system wastes taxpayers money twice. We provide subsidies to U.S. exports, which the Europeans and the Japanese then offset, so that neither our farmers not their consumers get more commodity at a lower price. Subsidizing our exports, however indirectly, does nothing to alleviate the underlying problems of Japanese concern about food security, and the European political and social problem of having too many farmers. Both the Japanese and Europeans are beginning to see the absurdity of their farmer protection policies. The U.S. lead in freeing markets would give their governments some ammunition for reducing at least the more extreme market distortions. On the supply side, a free market approach by the United States would put pressure on Canada, Australia, Argentina and other potential exporters to question the costs of supporting inefficient farmers against competitive U.S. farmers. For these countries, too, U.S. policy has a major impact on the environment in which they make their policy decisions.

Clearly, the free market option would not provide the level and security of incomes which farmers have sought and been promised (however vainly) through Government programs. Accordingly, it might be extremely difficult in the near term to persuade an administration or Congress to accept the rapid abandonment of all Government programs. We are only in the early stages of the new PIK experiment. Tinkering with the initial program has already grown, the rest of the world has not worked with us but is gearing up to exploit PIK, and talk has begun of extending the program—the sort of stereotyped reaction to planning failure, more planning, which Professor in't Veld described.

However, the transition to a free market could be strenghtened by a number of devices which are not now utilized. For example, Bruce Gardner has suggested the use of "put options" to provide farmers with greater price stability. Options are a well-tested financial instrument. For example, in the case of wheat, the writer of an option promises to accept delivery of wheat at a fixed price. The farmer buys the right to make delivery at that price by paying the writer a fee for the option. If the market price is higher, the farmer need not exercise his option but can hold or deliver elsewhere. If the market price is lower the farmer can deliver to the writer of the option at the fixed price. He would, of course, be out the cost of the option fee. The option fee will be quite low for modest market prices but will rise as the farmer's price needs rise. In a sense, the higher the price the farmer wants to fix, the higher the insurance fee he will have to pay. Options differ from futures contracts in that holders of futures contracts on the expiry date must accept or make delivery of the product. In actual practice, the option fee a farmer would have to pay for any fixed price would be closely related to the level of the futures price, when he might wish to sell his product. A futures hedge locks the farmer into a fixed price, a put option guarantees a minimum fixed price but permits the farmer to seek a higher price if available.

The major obstacle to use of put options is the lack of an organized market in such options. Gardner points out that Congress banned options trading in major agricultural commodities in 1936, but that the CCC loan program is in fact a put option in which farmers have the right to accept the loan rate or hold for a higher price. Often the fee the farmer must pay is reduced acreage or other consideration of value so these put options are not as it may appear free.

Initially Government could write the put options until a sufficient volume of private "writers" was developed to meet farmer needs. However, unlike the present programs, each farmer could decide in light of his business circumstances how much he was willing to pay to secure option coverage and at what price.

Another intermediate step from Government programs to free market has been suggested by Greig. The major problem producers of any commodity face is that they do not know prior to planting what other farmers will produce and the range of expected price. He is suggesting the use of modern telecommunications and computer capacity to aid farmers in freely deciding on plantings, knowing what others are going to plant. On one day prior to planting, say Durum wheat, farmers throughout the Nation would assemble in their local ASCS office. Each farmer would indicate his first estimate of acreage, yield and production of Durum wheat under his control for the coming year. All ASCS offices would transmit these estimates to national headquarters at Washington, D.C. where they would be instantaneously summarized. Headquarters would then transmit back to the local offices the total production of the first estimate and the expected price.

At that price, some farmers might wish to increase production, others to cut back or drop out of production of Durum wheat. They could then submit a second estimate which would be again transmitted to national headquarters and combined with the second esti-

mate from other areas to generate an expected total production and price. These iterations could be repeated until no significant change in estimates occurs. However, once the final iteration is reached farmers would not be permitted to plant more then they indicated in the last iteration. Since farmers would not know in advance which iteration might be the last, they could not play games but would be aware that each of their estimates could become legally binding. In small experimental tests, few iterations have been needed before the final iteration was reached.

For exposition, we have assumed that the process would be managed by the USDA's ASCS arm. However, it could equally well be managed by an impartial board of growers. The price forecasting models needed are already available and in use by the USDA. Of course these forecasting models can not predict weather or other upheavals in markets, but no system can. Since farmers' planting intentions are based as much on relative prices as on absolute prices, for example, Durum growers can grow other classes of wheat, safflower, and so forth, it may be desirable to run iterations for many crops simultaneously. All iterations need not be run on the same day. If farmers wished to refigure the implications of each new iteration there could be breaks of one day or one week between each. While telecommunications permits of one day or one week between each. While telecommunications permits almost instantaneous computing of all decisions, the quality of each and all decisions rests on the serious thoughtful consideration of individual farmers. If good decisionmaking takes time, so be it.

The Greig approach would be compatible with the put options approach of Gardner in enabling farmers to get a better fix on how much they might wish to pay for price insurance.

A further unrelated step that could be taken to disentangle the Government from agriculture is one I have advocated elsewhere of directing Government programs only at bonafide "core" farmers (O'Rourke, 1978). If we wish to compete in the world market (which we appear to do) we should attempt to identify and encourage the efficient, and those with the most productive land, labor, capital and management. Efficiency could be measured on a standardized cost per unit of product basis. While smaller, part-time farmers often tend to be less efficient, if such operators can match their bigger neighbors I would favor their inclusion as core farmers. Large operations which were high cost would not qualify. As the wave of new technology, for example, biogenetics, computer technology, plant protein research, reaches agriculture, the key to success will be the farmer's ability to tap and master new knowledge and new techniques. Core farmers would be eligible for emergency help in the event of natural disaster or market disaster, on the grounds that their productive potential is an important national resource. Smaller farmers without off-farm income who are not sufficiently efficient could receive welfare payments like those suffering hardship in other sectors of the economy. However, Government farm programs can not simultaneously provide welfare and promote efficiency.

Some special consideration may need to be given to attracting competent new entrants among core farmers. We might learn

something here from the successful farm apprenticeship scheme operated in New Zealand.

SUMMARY AND CONCLUSIONS

In this paper I have tried to show that the philosophies and methods of farm programs that were appropriate in the 1930's are increasingly inapplicable in the 1980's. Congressional attempts to legislate agricultural policy for 4 years ahead have been so flawed that even the proponents have sought major changes long before the 4 years expired.

Agricultural policies are justified only if the benefits exceed the costs to taxpayers, producers and consumers. The benefits have usually been very mixed because the goals sought have been overlapping or contradictory. For example, the two main legs of price and income support policies have been methods of adjusting the volume marketed by participating farmers (usually down) and providing financial incentives to participants (usually up). Only rarely do these approaches work together to reduce production and raise farm prices.

The distributions of benefits have also been mixed because farmers differ so much in size, management systems, debt load and other key characteristics. Present programs often provide supplementary income to farmers who are not really needy and to needy who are not really farmers. Over time, large farmers and consumers appear to have consistently benefited, but farm programs have done little to stimulate efficient resource use or export competitiveness, two goals which will be increasingly important in a world of greater international interdependence.

Benefits have also been neutralized by offsetting measures taken by competitors such as Canada or Argentina or customers such as the European Community and Japan. It is not just that U.S. agricultural policies are at odds with those of other countries but that due to its eminence in world trade U.S. agricultural policies are used as a starting point for debate about and decisions on what other countrys' agricultural policies might be. It is folly for the United States to adopt an agricultural policy which can be easily neutralized or may create anti-U.S.-sentiment in the policy debate in other countries.

The options available to U.S. agricultural policymakers in the next decade range from mandatory controls at one extreme to zero Government intervention at the other with many alternative mixed strategies in between.

Despite the apparent rationality of a mandatory program (particularly in controlling supply), our analysis suggests that a rigidly structured, centrally controlled agricultural policy, is contrary to U.S. democratic traditions, is unlikely to endure because under the U.S. Constitution powers are separated both within Government and between Government and the private sector, and would require the sort of detailed planning that has proved so ineffective in democracies. The "new" payment-in-kind (PIK) program which leans in the direction of greater Government intervention, already seems doomed to suffer from such woes as congressional criticism, increasing complexity, dissatisfaction of some farm groups, exploi-

tation of PIK by other countries, less than satisfactory reduction in production and the need for a second dose of PIK to make up for the inadequacies of the first.

The free market option would offer immediate savings in Government costs and would probably have little impact on the incomes of efficient farm producers, or on the price and availability of food to consumers. However, it would encourage more efficient use of resources and stimulate export competitiveness. On the negative side, it would hurt the inefficient and would remove any buffering effect the Government programs currently have on income stability.

A rapid move to a free market situation seems unlikely (witness the dairy industry's rearguard action against reductions in price supports). However Government could move nearer to the free market option with less risk by utilizing commodity option markets to reduce price instability, by utilizing modern electronic computing and telecommunications facilities to reduce price uncertainty, and by limiting support expenditures to its lower cost farmers who are most likely to be able to utilize emerging technologies and are most critical to maintaining the comparative advantage of U.S. agriculture in foreign markets.

Given the failure of incremental tinkering with 1930's-style agricultural policies, and the major problems with mandatory controls under the American political system, it seems that the most effective and least risky strategy for policymakers is to unleash, rather than trammel, the international comparative advantage of the great U.S. agricultural industry.

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REPORT OF THE KANSAS AGRICULTURAL WORKING GROUP

(By B. L. Flinchbaugh, Ph. D.*)

It has been my privilege these past several months to serve as the chief resource person to the Governor's Agricultural Working Group in Kansas. The bipartisan group of Kansas farmers and agribusiness leaders were charged with reviewing current agricultural policy and exploring alternatives.

The group quickly determined that current policy wasn't working. They were particularly concerned with the temporary crisis management approach to policy. In 1981 and 1982, a modest acreage reduction program was fielded by an administration with a free market philosophy and export promotion orientation to solving agriculture's overcapacity problem. The farmer-owned reserve of the previous administration was continued basically open-ended, and so farmers were encouraged to produce. The result: record carryover stocks and weak world demand, which prompted the PIK program, yielding 83 million acres retired and massive intervention into the marketplace.

Shortrun crisis management agricultural policy is inconsistent with the planning horizon required in modern agriculture. PIK provided Kansas wheat producers with a minus several months planning horizon. And just think of the feedlot operator who planned his operation with record feed grain surpluses and now has PIK and the drought to contend with.

Thus the group decided what we need is long-term policy. How do we get that? Isolate it from the day to day political whims of the Congress and the President. Set up a new institution that would manage commodity programs and set the specifics such as set-aside requirements, loan rates, target prices, and amount of stocks to be carried over in a reserve, within broad general guidelines established by the Congress and the President. Such an institution could, for example, establish the free market as U.S. agricultural policy and prevent domestic intervention by the political system succumbing to pressure. Though part of the political system, it would be quasi-independent.

The group has in mind a Food and Fiber Federation patterned after the Federal Reserve Board that sets monetary policy. The board of governors of the federation would have staggered terms that wouldn't coincide with Presidential elections. It would be broad based—producers, agribusiness consumers, financial representation. A distinct departure from the past, yes, but how else do

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we get long-term policy? We certainly haven't had it from the current system.

The Governors' group concluded that several policies would work if they were long term rather than temporary. After exploring many alternatives, including the Food and Fiber Federation, the group decided to recommend the appointment of a bipartisan, blue-ribbon commission at the national level of recognized statesmen in agriculture, to begin developing a new approach to agricultural policy and preparing for the 85 farm bill.

This approach was recently successful with Social Security. Because the people demanded it, the President and the leaders of Congress worked together and appointed a commission of respected individuals, which recommended and guided through Congress intact a solution that will save Social Security at least for 10 years. Agricultural problems are just as critical, so why not try the same thing, the group concluded.

This commission could be the first step towards developing a long-term agricultural policy; towards setting up a new institution like the Food and Fiber Federation.

In October, the group took its report to the Midwest Governors' Conference, and succeeded in securing the unanimous passage of a resolution calling for a new institutional mechanism to bring about long-term agricultural policy. The next step is the National Governors' Conference.

A new approach to developing a long-term agricultural policy consistent with investment decisions in agriculture is possible if no one becomes concerned about who gets the credit. But if the plan becomes partisan, is used to promote a candidate, or if farm organizations refuse to cooperate because their turf is threatened, it's dead. And we will have more of the same.

[COMMITTEE NOTE.—The entire text of the Kansas Agricultural Working Group report can be found on p. 154.]

ALTERNATIVES TO CURRENT COMMODITY PROGRAMS*

(By Lyle P. Schertz and Kenneth C. Clayton[1])

ABSTRACT

There are pressures which may lead to changes in U.S. farm programs. Alternatives include, but are not limited to options, revenue insurance, and sector income supports with tax credits. The three approaches are complementary in that options would facilitate development of revenue insurance programs involving the private sector. Initiation of options and of revenue insurance would not preclude an income support program focused on the sector as a whole. The particular approach to income support identified could involve tax credits tied to value of farm product marketings; however, benefits could be distributed by many other criteria.

Keywords: Commodity policies, commodity options, revenue insurance, tax credits.

SUMMARY

Pressures to change commodity programs are likely to increase because of continued instability of farm incomes and prices, inconsistencies between programs and increased exports, and concentration of resources, incomes and program benefits. Major alternatives include, but are not limited to:

Private sector trading of options to buy and sell commodity futures contracts.

Revenue insurance to cover losses from adverse commodity prices and low yields.

Tax credits to support net income of the farm sector.

Trading of agricultural commodity options on a trial basis will likely start in the fall of 1984. These market options will differ importantly from the current price support programs. Price supports involve "put" arrangements. They are provided free to producers. In contrast, premiums for "puts" and "calls" would be involved with option markets. Also, price supports are administratively and politically selected. In contrast, premiums for options would relate directly to market conditions. Options are not a substitute for programs that restrain supply or expand demand. However, they may

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[1]The authors are, respectively, Economist and Director of the National Economics Division of the Economic Research Service, USDA.

This paper does not advocate any specific policy nor does it represent views of USDA. It draws on dialog with many colleagues in and out of ERS. We especially appreciate counsel and advice of: Kenneth Baum, Clark Edwards, Bruce Gardner, Douglas Gordon, David Harrington, David Kenyon, Allen Paul, Neal Peterson, Gerald Plato, Michael Price, Larry Salathe, Lloyd Tiegen and James Zellner.

be a substitute for features of current Government programs that transfer risks from producers to taxpayers and consumers.

Implementation of a system of farm revenue insurance for individual producers will be hindered by difficulties involved in the specification of actuarial standards for prices. These difficulties arise because of the uniqueness at any point in time of the expected value of the probability distributions of future prices, the influence of institutions on the shape of these probability distributions, and the lack of independence of price losses among those insured. Options could complement the commercialization of revenue insurance in that purchases of put contracts by an insuror would transfer price risk to writers of put contracts. However, as with options, revenue insurance is not a substitute for programs restraining supply or expanding demand. They may substitute for features of current programs that transfer risk from producers to taxpayers and consumers.

A farm income support program using tax credits as outlined, would assure producers as a whole a certain level of net farm income. However, it would not assure net income levels of individuals. Two major administrative tasks would be involved in the implementation of such a program.

Determination annually of an income payment pool based on the assured level of sector net income and the net income realized by the sector from markets, and

Determination of tax credit per dollar of marketings that Federal income tax filers would apply to their value of marketings in preparing their individual income tax returns.

With such a program, market prices would freely adjust and markets would clear. Producers would have incentives to take into account changing relative market demands and changing relative production costs. Producer returns would be greater than without any programs to transfer income. However, they may not be greater than with present programs.

It is important to note that effects of the program would be closely related to how the pool is distributed. It need not be distributed according to marketings; thus income redistributions inversely related to farm size or some other criterion could be applied.

Opposition to such a program would likely arise for several reasons including loss of subsidies currently targeted to specific commodities and fear of increased production of commodities not currently subsidized.

INTRODUCTION

Commodity programs such as price supports, deficiency payments, and restrictions of supplies have been pursued in various forms for the past half century. Even so, there remains anxiety over the welfare of the farm sector. And, there is uncertainty about whether these programs are effective in attaining policy objectives related to price risk and income. In spite of large Government expenditures and programs that cause consumer prices to be above free market levels, farm product prices in many markets and farm income continue to be unstable. Many argue that the level of farm income is inadequate. In addition, the commodity programs have,

in some instances, undercut other farm oriented goals such as increased U.S. farm exports. Thus, it is logical to ask, what are some major alternatives to the current commodity programs that support farm income?

This paper briefly reviews present commodity policies and the pressures to find alternatives to current programs. It then, as requested by the meeting organizers, focuses on the principal features and implications of three major alternatives—commodity options involving put and call contracts, revenue insurance, and sector income support with tax credits.

CURRENT POLICIES AND PROGRAMS

The rationale for farm programs encompasses risk as well as equity concerns. Instabilities of farm production and, in turn, prices associated with weather changes create risks for producers. Resource use in such circumstances is less efficient than it would be under stable conditions. In addition, comparisons between the incomes of people in the farm sector and nonfarm people have been used to argue that a substantial portion of farmers were disadvantaged. These conditions, in turn, have been important justifications for the public's sharing of the production and price risks inherent in farming and for transfers of income to farmers and ranchers from the nonfarm sector. The resulting farm programs have focused primarily on commodities. They have involved:

Support of market prices through Government loans and purchases with additional support of income with deficiency payments;

Restriction of production and marketings; and

Expansion of quantities demanded domestically and internationally.

The Government supports market prices through loans to producers and through purchases of commodities by the Government. The loans are made by the Government to producers, to their associations, or, in the case of sugar, to processors. The amount of the loan is based on announced price support levels. The loan recipient may repay it and the accrued interest at any time or may forfeit the related commodities in satisfaction of the loan and interest. Government purchases support dairy product prices.

Crop production is restrained through programs that reduce planted acreages. Present crop programs give individual producers a choice between:

Complying with applicable acreage restrictions to be eligible for related loans, deficiency payments and special payments such as with the current payment-in-kind program; or

Not complying and, thereby, foregoing Government payments and eligibility for related direct benefits.[1]

Deficiency or direct payments are income transfers based on the difference between an announced target price for the respective commodity and its market price or the loan rate, whichever is greater.

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[1] It should be noted that to the extent Government programs have a positive influence on price, nonparticipants enjoy that benefit along with participants.

Some programs require producers to restrict acreage and marketings. Such a program is in effect for extra long staple cotton and most tobacco. In addition, some market orders restrict the quality and timing of marketing of certain products. Other marketing orders discriminate among markets, restricting the amount of production that can be sold in markets having more price inelastic demands with the remainder being sold in markets with more price elastic demands.

Some programs, like the food stamp program, have also been used to expand the demand for food. "Qualifying" people receive food stamps in amounts based on family income and size. These stamps can be used to buy food from regular commercial outlets. In addition, such commodities as beef, turkey, potatoes, and various fruits and vegetables are purchased by the Government and donated to schools, special programs for the elderly, and other recipients.

Demand is also expanded through export promotion with Public Law 480 and special credit arrangements. The Public Law 480 programs permit discrimination by price and "other contract provisions" among Government agencies of other countries which import U.S. commodities under these programs. Special credit arrangements permit lowering the economic costs to the importing country without adjusting "prices." The recently initiated blended credit program involves a combination of direct Government credits and guarantees of commercial credit.

In combination, these programs involve the socialization of the risks of farm product price declines below announced levels. Transfers of income from others in society to producers and owners of farm related resources are made in two ways—Government payments to producers and increased market prices—as a result of Government programs which restrict supplies and expand demand.

PRESSURES TO EXPLORE ALTERNATIVES

Several developments give rise to pressures to examine current commodity programs. These include:

Continued instability of farm prices and farm incomes;

Possible inconsistency of some programs with the achievement of increased exports; and

The maturation of the U.S. farm sector.

Prices in many commodity markets continue to be unstable. Farm corn prices in the past 3 years, 1980, 1981, and 1982, have been as high as $3.25 and as low as $1.98. Comparable prices for wheat are $4.16 and $3.22; for hogs $61.30 and $28, and for cotton $0.809 and $0.491. Milk prices have been much more stable, largely because stability has been achieved through the accumulation of huge Government stocks of dairy products. Farm sector net income has also been unstable reaching $32.3 billion in 1979, but dropping to $20.1 billion in 1980.

During the decade of the seventies, exports became a major outlet for U.S. commodities. Whether U.S. commodity programs have hindered or enhanced U.S. farm exports in the long run is a matter of considerable interest. For example, the availability of U.S. stocks has encouraged some importers, such as the U.S.S.R., to buy U.S. commodities. The availability of stocks has probably also

discouraged some governments from stimulating production increases of their own agriculture.

In contrast, the support of U.S. commodity prices by loan programs may have meant higher export prices and less downward flexibility of prices in response to competition from other exporters and to increases in the value of the U.S. dollar. The net effect is uncertain.

The introduction of the deficiency payments concept was an important step in partially unlinking government income support from Government support of market prices. In general, however, greater downward flexibility of U.S. commodity prices would seem to be more consistent with our export promotion programs than are price support levels that do not take into account foreign competition and changes in the value of the dollar.

Other pressures to examine current commodity programs relate to the maturation of the sector. The characteristics of the farm sector are vastly different from those prevailing when most of the current commodity policies were initiated and developed. There are about 2.4 million farmers today, compared to 4 million in 1960 and 6.5 million in 1935. Production is highly concentrated in contrast to earlier condition. Less than 5 percent of U.S. farm establishments produce nearly one-half of U.S. farm production. In 1979 these establishments realized an average net farm income of nearly $113,000 and another $13,000 of nonfarm income.

The distribution of the direct and indirect commodity program benefits is consistent with the increased concentration of production. The major portion of the direct, as well as the indirect, benefits of commodity programs go to larger producers (Lin, and others). These producers had large wealth gains in the seventies and have larger incomes than those receiving smaller individual benefits from the programs.

A portion of the large producers, however, are particularly susceptible to price and production instability. They have high debt-asset ratios, generally because of highly leveraged expansion in the late seventies. Some smaller producers also have high debt-asset ratios, making them also susceptible to price and production instability.

It is unclear how the combination of wealth increases and the distribution of program benefits will, in the end, affect legislation.[2] Admittedly, these distributions seem inconsistent with the public's perception of farm programs and the justification expressed in most legislation for the programs. On the other hand, these distributions may be consistent with the intent of legislators and the short-term interests of strong supporters of the current programs.

Substantial costs of commodity programs and the severity of the national budget deficit are also providing an impetus for reexamining such programs. Current estimates are that Government outlays in fiscal year 1983 for commodity price and income support will be around $20 billion. This number does not reflect the value of commodities provided to producers under the payment-in-kind (PIK)

[2] See Pelzer and Skoloda for discussions of the possibilities that greater awareness of the relationships between farm programs and large-scale farmers will lead to reduced Government involvement.

program. Further, it is large when compared to estimated 1983 net farm income of $18 to $22 billion and estimated cash receipts of $134 to $138 billion. At the same time that anticipated Government outlays for commodity programs are large relative to those of the 1970's, the national budget deficit is extremely large. These fiscal conditions are the basis of intense pressures to reduce Government expenditures, including those related to agriculture.

Aside from their relevance to Government expenditures, the recent buildup in stocks also raises the question of whether the commodity programs are sufficiently flexible to take into account changes in export demands, and the cost structure of more efficient producers. This leads to other questions. For example, can export demand and probable U.S. production be anticipated early enough to enable reasonable adjustments of U.S. commodity programs? Even if the answer is technically yes, would the U.S. political process permit adjustments of programs to anticipated conditions? Similar questions arise about the ability to anticipate declines in production costs of the more efficient producers and to make appropriate adjustments in program provisions.

Thus, there is likely to be increasing pressure to change existing commodity programs because of: (1) Continued instability of incomes and prices; (2) the inconsistency between the programs and increased exports; and (3) concentration of resources and incomes within the farm sector. The high cost of farm programs at a time of large national deficits and a growing concern over the distribution of benefits to large and higher income farmers could significantly alter popular and political support for the programs. The process of change, if and when it occurs, could be dramatic or might well be limited to small adjustments in policies and program provisions. In either event, it is useful to consider major program alternatives. Such reviews can lead to a clearer understanding of the programs eventually implemented and a better appreciation of the issues. Three possible alternatives are discussed in this paper, not in any sense of advocacy but as one step toward an improved dialogue on future policy issues.

ALTERNATIVES

Three major alternatives to current commodity-oriented programs are:

Private sector trading of "options" to buy and sell commodity futures contracts;

Revenue insurance to cover losses from adverse commodity prices and low yields; and

Tax credits to support sector net income.

The first two alternatives would reduce (relative to free market conditions) the variance of incomes of individuals who produce and market the products for which options were traded and for which insurance was available. They would not cause incomes to be different from what would otherwise be realized except as transfers of risk permitted greater efficiency of resource use or unless special subsidy features were included. None of the three alternatives would directly manipulate individual commodity prices as present commodity programs do. The third alternative would utilize a

system of tax credits to support the income of the sector. Because the amount of support would not be tied to specific prices or commodities, farmers would have incentives to seek the most profitable mix of production.

The "current political acceptance" of the three alternatives contrasts sharply. Trading of options on a trial basis will likely start in the fall of 1984. Revenue insurance has been recently examined by a task force mandated by the 1981 Agriculture and Food Act. Sector income supports have not been included in the national policy dialog.

The inclusion of the three alternatives gives focus to the issue of how Government programs relate to farmers' risks. Further, their inclusion allows scrutiny of how "concerns" about risks and pressures for transfers of income from society to particular commodity groups are related. For example, commodity options represent a major approach to transferring risks from producers to others. However, their consideration brings immediate attention to whether their exercise prices would be below prices consistent with current support programs and if transactions by producers would be subsidized by society. The "Who will pay?" question is related also to the revenue insurance alternative.

The sector income support alternative would involve explicit consideration of the appropriate level of income for the farm sector. Discussion of the implications of this alternative point to issues related to income distribution among producers, how programs tend to protect certain producers more than other producers, and how producers not directly affected by Government programs may be indirectly affected by current programs.

OPTIONS

Definitions

In 1983 the Commodity Futures Trading Commission authorized trading of agricultural commodity options on a pilot basis. Legislative prohibitions imposed on such trading in 1936 were removed in 1982. Government officials and academicians argue that the trading of put and call options could be an effective means for transferring risks from producers to others in the private sector (Lesher, Gardner). The cost for accomplishing this transfer could be borne entirely by producers, by the public, or could be shared.

Several terms have particular meaning for option markets:

Put option. A contract that conveys the right (but not the duty) to *sell* a particular commodity futures at a particular price until a stated expiration date.[3]

Call option. A contract that conveys the right (but not the duty) to *buy* a particular commodity futures contract at a particular price until a stated expiration date.

Options seller/writer. An individual who sells the option to the buyer and therefore assumes the opposite side of transactions if buyers of the options choose to exercise them. For example, if a

[3] This discussion focuses on options on futures contracts. Options could also be in terms of the actual commodities. The principles would be the same. However, the administrative approach would differ.

buyer of a put option for December corn futures at $3 a bushel decided to sell corn futures at $3 a bushel, the writer of the put option would be obligated to buy the December corn futures at $3 a bushel from the holder of the put option without regard to the price of December corn futures at that time. And, if a buyer of a call option for December corn futures at $2.50 a bushel decided to exercise the option, the writer of the call option would be obligated to sell the December corn futures to the holder of the call option at $2.50 without regard to the price of December corn futures at that time.

Exercise price. The price at which the buyer of a put option can sell the commodity futures contract and, in the case of a call option, the price at which the buyer of a call option can buy the commodity futures contract.

Premium. The transaction price for the options contract (the amount the buyer pays and the writer receives for an options contract).

The possible use of options markets can be illustrated with two examples. First, imagine a corn producer who anticipates in April that his production will be 10,000 bushels of corn and that he will harvest it in October. Suppose further, that the current cash corn price is $2.50 per bushel, that the price for forward contract October delivery is $2.25, and that a December futures corn put option has an exercise price of $2.25 and a premium of $0.20 a bushel. These conditions implicitly say two things: (a) some people are willing to pay $0.20 for the right to sell December futures at $2.25, and (b) some others are willing to write this option for $0.20 and undertake the repsonsibility to buy December corn futures at $2.25, if buyers of the put options decide to exercise their option.

The imagined producer could forward contract, but then would have to forego the opportunity to sell corn above $2.25. Further, there is some risk as to whether the producer would have 10,000 bushels to sell. In turn, the producer might be willing to pay $2,000 ($0.20 times 10,000) for the right to sell the 10,000 bushels at $2.25. In so doing, the risk (on 10,000 bushels) of prices going below $2.25 is transferred in exchange for $2,000; the opportunity to realize gains from prices going above $2.25 is retained and the obligation to deliver 10,000 bushels as with the forward contract is avoided.[4]

Second, imagine a cattle feeder in April anticipating the need for 10,000 bushels of corn in October. Assume market prices as above and a premium for a $2.25 December futures corn call options of $0.20 a bushel. The feeder could forward contract, but then would have to forego the opportunity to buy the corn below $2.25. In turn, the feeder may be willing to pay $2,000 for the right (but not the duty) to buy the 10,000 bushels at $2.25 per bushel.

Price supports—A put

The current commodity price support program is a "put" arrangement as Gardner indicates. However, two featues of the price support program are sharply different from a set of market options. First, the "put options" provided by the Government do not

[4] We assume a constant difference between cash prices and prices of futures contracts in order to simplify the discussion.

involve the payment of premiums by producers. But conditions are required in some cases such as diversion of acreage or the Government holding a modified "call" option at higher prices in the form of the release price on the stock in the farmer-owned reserve. Further, the price support levels are administratively and politically selected. They may or may not reflect market forces that would influence the exercise prices in option markets. In addition, farmers' use of the free "put" options under the current loan programs is most likely greater than if they had to pay for them.

In times of Government stock accumulation, price support levels probably have been greater than market determined option exercise prices would likely have been. Obviously, the market system could set exercise prices equivalent to levels comparable to current support prices. However, premiums for such options would reflect the difference between expected market prices consistent with anticipated market supply and demand conditions and the exercise prices incorporated in the options contracts.

Compatibility with other programs

Questions arise with any institutional change concerning its compatibility with present institutions. Thus it is appropriate to ask, would trading in farm commodity options be compatible with current price support programs and with transfers from the public to individual producers such as deficiency payments?

Premiums on option contracts would reflect a variety of institutional arrangements. The combination of exercise prices and premiums with the Government facilitating the withholding of 50 million acres from production would be different from the combination of exercise prices and premiums if the Government was not involved in such activities. The availability of price supports would influence the probability distributions of prices, alternatives available to producers, and therefore, the combination of exercise prices and premiums in the options markets.

The volume of trading in options may also be influenced by Government programs. For example, producers' interest in buying say, puts, would be influenced by the availability and level of price supports, as would the interest of potential writers of puts. The volume of futures trading declined significantly in the fifties and sixties as large Government stocks reduced price fluctuations.

The mixing of Government activities with options has the danger of stifling the viability of options trading. Option markets require participation of speculators. They are particularly wary of markets in which prices can be significantly influenced by administrative and political decisions of governments.

Implications

The hypothesis is that the availability of options markets would not cause commodity prices and therefore related farm income to differ significantly from prices and farm income levels prevailing without such a market. Under these conditions, options would not substitute for programs restraining supply or expanding demand. Options may, however, substitute for programs transferring risks from producers. The Government, for example, could accept bids from speculators to write put contracts at exercise prices consistent

with previous price support levels. Ownership of these put contracts could, in turn, be distributed to producers who qualify according to specified criteria. This practice with public assent could continue as a substitute for the present price support program.

Alternatively, the public could decide to provide a specified subsidy to each producer who purchased put options. The subsidy may be less than, equal to, or greater than the premiums paid. However, the subsidy could be increased or decreased over time and, thereby, be used to compensate producers for price risk and to subsidize income levels. Transfers from Government to producers need not be tied to the use of options.

Options may be more attractive to producers than futures because of the "known" nature of the transaction and the cost associated with it. As stated above, the purchase of an option provides a very specific right to the purchaser and for a price which is fixed at the time of the transaction. In contrast, with futures contracts price changes can lead to margin calls even if combined price movements of the cash commodity and the futures position do not result in financial losses. Margin calls are inconvenient and disliked.

At the same time it is important not to expect too much from options markets. Paul argued, in commenting on Gardner's AJAE paper on options, that conceptually the "strategic use of futures" could accomplish producer objectives as well as the use of options could accomplish them. However, farmers have not used futures in the ways to which Paul refers. Also, insurance companies have not developed price insurance programs based on such techniques. Would their response be different when options are traded?

In summary, option markets could facilitate transfer of risks from producers. However, they would not likely stabilize market prices. It is conceptually possible for the Government to tie income transfers to the use of option markets. If this were done, those most likely to use the option markets—the larger producers—would benefit most. Option markets, with or without associated income transfers, would not interfere with flexibility of prices in response to changes in export demands.

REVENUE INSURANCE

Schuh's presentation to an American Enterprise Institute symposium in 1980 is credited as the first formal proposal of a revenue (income) insurance approach for U.S. agriculture. He proposed a subsidized income insurance program whereby individual producers of crops could select a percentage of their individual normal yield and a price of the commodity for which they wish to be insured.

For Schuh, the transformation of U.S. agriculture was nearly completed. Impressed with the balance between commodity demands and supplies in the seventies, he argued that: "The secular income problem arising from excess labor in agriculture is essentially behind us." (p. 14.) However, he anticipated a ". . . severe problem of income instability, and a problem of rural poverty associated with disadvantaged families and regional stagnation." The proposal for insurance related to the first of these conditions.

Crop insurance

The present crop insurance program has some features consistent with an income insurance approach. Other features are not consistent. Crop insurance is essentially for yield losses below selected percentages of the yield history for the individual producer. Premiums are, in turn, linked to the percentage of yield protection desired and the price selected by the producer.

Suppose a corn producer picks $2.50 a bushel and the insurance policy calls for protection against shortfalls of yields below 90 bushels per acre. With an actual yield of 70 bushels, the payment would be $50 per acre (20 bushels times $2.50) regardless of the market price for corn. In contrast, the producer would receive no payment if the yield was 90 bushels or more even if the price was below $2.50. Thus, while the Federal Crop Insurance Corporation uses commodity prices, there is no insurance of the price unless the yield falls below the insured level. And, then the price protection applies only to that portion of the crop represented by the difference between the insured level and the yield.

Possible insurance approaches

There are several ways to construct a revenue insurance program. For example, programs could be in terms of insurance against:

Loss of yield at designated/selected prices as is done with the current FCIC program;

Price shortfalls for designated/selected yields; and

Shortfalls of value of production (price times production).

We presume that Schuh's ideas relate to the third of these concepts and the "farm income protection insurance" study called for in the Agriculture and Food Act of 1981 relates to this concept as well. It is, however, useful to first focus on the second concept—insurance against price shortfalls for designated/selected yields.

This is because development of actuarial data for prices as distinct from actuarial data for yields, is particularly difficult.

Price probability distributions

Probability distributions for commodity prices are substantially different from probability distributions for yields. For example, probability distributions for future yields are applicable to specific geographic areas and specific crops. These distributions are sufficiently stable over time so that commercial insurance firms have translated them into actuarial standards applicable to individual crops grown by individual producers on particular parcels of land. These standards can, in turn, be used as a basis for specifying insurance premiums for selected levels of production and related payouts.

The Federal Crop Insurance Corporation (FCIC) is not always able to establish historical yield distributions for particular land parcels. When such data are not available, FCIC uses recent yield data for the parcel and the variance of county wide data to establish a distribution of historical yields for the particular parcel.

In contrast, the expected values of the probability distributions of a particular commodity price in the future are unique at any spe-

cific point of time. Also, the "shape" of the probability distribution may also vary from one time to another because of institutions. These characteristics would likely lead private insurance companies to either:

Avoid becoming involved with a scheme that involves transfers of price risks from producers to insurance companies; or

Operate a quasi-dealer-options market as contrasted to the traditional insurance approach based on actuarial standards.

An insurance program against price short falls for selected yields might operate as follows: Suppose the current market price for corn is $3 per bushel. Further, assume that producer A wishes to have insurance that the price for 20,000 bushels of grain, will be at least $2.50 per bushel. In responding positively to such a producer, the insuror writes an unofficial put which grants the producer the right to sell 20,000 bushels at $2.50 in December. The premium charged to the producer would depend on the exercise price, $2.50 in this case, and the insuror's perceived probability distribution of prices in December. The premiums will be small if the insuror is convinced that the probability of prices being above $2.50 in December are very high. On the other hand, if the insuror assesses probability of prices being below $2.50 to be very high, the premium will be larger.

An important question implicit to approaches involving individuals taking positions relative to prospective price changes arises:

Do prices behave consistent with the random walk theory? This theory holds:

That the price of a commodity at a future point in time is equal to the current price plus applicable carrying charges between now and that time, plus random changes of price;

That the variance of the price changes in the future is constant over time and predictable from historic price changes; and

Therefore, the expected price for a future point of time is the current price plus anticipated carrying charges.[5]

In contrast to this theory, individual forecasters of commodity prices regularly anticipate that prices in the future will in fact be different than today's prices by more than the related carrying charges.

Institutions

Various institutions and institutional decisions alter the probability distributions of prices in futures markets. Recognizing this situation Plato argues that futures markets and nonrecourse loans are incompatible in that they are alternative means for producers to protect against price declines. Price supports obviously influence the possible effects of random events. Loan levels and related program provisions also affect the behavior of prices. Further, random events may lead to expected actions. For example, is there a feedback effect of low prices (if they occur) on policy decisions in Washington? Administrative events may also lead to policy changes. Would the purchase of 60 million tons of wheat in the U.S. market

[5] See Gordon for a description of the random walk theory.

by another country lead to U.S. Government action that mitigated the price effects of the purchase?

Independence of losses

Aside from the ability to anticipate the probability distribution of prices, potential insurers of prices must deal with the extent of independence of losses among those insured. For example, corn yields on a farm in Nebraska are probably independent of the corn yields of an Illinois farm. Thus, an insuror by writing crop insurance over a wide area can generally avoid risk of widespread losses. In contrast, if corn prices dropped below insured levels price insurance policywriters would likely incur losses over large market areas.

Options and revenue insurance compatibility

Lack of independence of realizable prices along with the unfamiliarity of personnel of typical insurance companies with commodity markets lead to the idea that there could be significant complementarities between options markets and a system of revenue insurance.

An active options market would be a vehicle for transferring risk. The purchase by the insuror of a put contract would transfer the price risk from the insuror to the writer of the put contract. Or, regulated private dealers might be permitted to write puts. An insuror could, in some cases, use the futures market to accomplish the same thing as in an options market.

The public could intervene in several ways through their Government. The Government could:

Insure private insurance companies against losses;

Offer subsidies to either the producers who take insurance, the firms that write the insurance, or the writers of put contracts in the options market; or

Assume the insuror's role.

Subsidies may or may not be involved in the latter approach. In an alternative approach, costs could be covered partially or entirely by premiums paid by producers. Income insurance would involve joint probability distributions of yields and prices. These bivariate distributions would presumably reflect the probability distribution of the yields of a specific crop on a parcel of land and the probability distribution of prices. However, changes in yields on an individual parcel and prices are not necessarily independent. For a specific parcel and a specific crop they may be. The challenge for an insuror would be to identify which parcels and related crop yield changes are randomly independent of price changes and which are not.

Institutions and administrative arrangements associated with options markets and with a system of revenue insurance would differ. Even so, several effects of a revenue insurance program, if operated without subsidies, would be similar to those of an options market. Costs and benefits associated with risk would be internalized. The markets would operate efficiently in communicating changes in supply and demand, as would the markets for transferring risk. Individual producers would presumably equate the benefits of transferring risk to the cost for achieving this transfer. Prod-

uct and factor mixes would reflect these benefits and costs. Related efficiencies, however, could be eroded if Government programs subsidized the activities.

In summary, developing a system of revenue insurance for individual producers involves difficulties in developing actuarial standards for prices. These difficulties arise because of the uniqueness at any point in time of the expected value of the probability distributions of future prices, the influence of institutions on the shape of these probability distributions, and the lack of independence of price losses among those insured. Options could complement the commercialization of revenue insurance in that purchases of put contracts by an insuror would transfer price risk to writers of put contracts. However, like options, revenue insurance is not a substitute for programs restraining supply or expanding demand. They may substitute for features of current programs that transfer risk from producers to taxpayers and consumers.

TAX CREDIT SECTOR INCOME SUPPORT PROGRAM

A third major policy alternative reflects elements of current policy and past proposals such as deficiency payments.[6] The U.S. Government would assure producers as a whole a level of net farm income. However, the farm related net income levels of individuals would not be assured directly. Prices in markets would be free to adjust. Quantities consumed, exported, and stored would reflect market prices and tax credits associated with the program.

Administrative tasks

With the tax credit sector income support program (TCSISP) two major administrative tasks would be involved. The first would be to determine annually an income payment pool based on an assured level of sector net income and the net income realized by the farm sector from markets. For example, legislation might state: "The U.S. Government will transfer funds (to producers) under this tax credit sector income support program (TCSISP) so that net farm income associated with production and sale of all commodities plus the tax credits associated with this program equals at least $20 billion." Accordingly, an "income payment pool", would be calculated. This pool would equal the difference between: (1) U.S. net farm income realized from the market and influenced by other Government programs such as agricultural conservation payments, and (2) the "assured level" of net farm income, $20 billion in this example.

The second step would be to determine a tax credit per dollar of marketings that Federal income tax filers would apply to their value of farm marketings in preparing their individual income tax returns. Thus, a very specific approach for distributing the income payment pool is included: distribute the income payment pool proportionally to the value of marketings of farm commodities through the use of Federal income tax credits. Implicit to this proposal is the notion that tax filers could realize these credits even

[6] These features are similar to those developed by Norton and Working, and Froker in the 1940's. The Canadian Western Grain Stabilization Program includes some features similar to those presented here as well.

though their tax obligations were less than the tax credits associated with the program.

In the interest of clarity, specific approaches to other analytical and administrative tasks are identified. In late December of each year, estimates for the current year would be made for the U.S. farm sector for:

Farm-related receipts including Government checks but excluding transfers pursuant to the TCSISP program;
Farm production costs; and
Net farm income.

Suppose that these numbers were

	Billions
Farm receipts	$160
Farm production costs	143
Net farm income	17

This information, along with an assumed guaranteed income level of $25 billion, would imply an $8 billion income payment pool.

The IRS Form 1040 would be revised to include the calculation of a farm income support tax credit.

The lines might read as follows:

39a—Enter eligible farm marketings from line ..... of Schedule F.....
39b—Tax credit per dollar of marketings announced by USDA and IRS on January 1, 19XX .....
39c—Multiply line 39a by 39b and enter the amount in the tax credit box of this form .....

The tax credit per dollar of farm marketings would be announced on January 1 for the previous calendar year. For the above example the credit would be $0.05. The amount that estimated net farm income of all producers was below the assured sector net farm income ($25 billion minus $17 billion) divided by estimated farm receipts ($160 billion). In turn, each individual's tax liability would reflect the calculated tax credit for farm income support. Using the above tax credit per dollar of farm sales, $0.05, there would be a tax credit of $5,000 for a Schedule F filer showing marketings of farm products of $100,000.

Graphical representation

Figures 1 to 6 illustrate some of the theoretical economic implications of the sector support approach outlined above. Figure 1 depicts conditions without commodity programs. For the sector, DD is demand at the farm level for U.S. agricultural production and is the summation of demands for export (D_xD_x) and for domestic use (D_dD_d). The area abcd depicts total market receipts. The demand for the individual farm is equal to price, P_o. The production of the individual farm influences price, but its effect is so small that the farmer does not perceive the effect.

Figure 1. Supply and demand

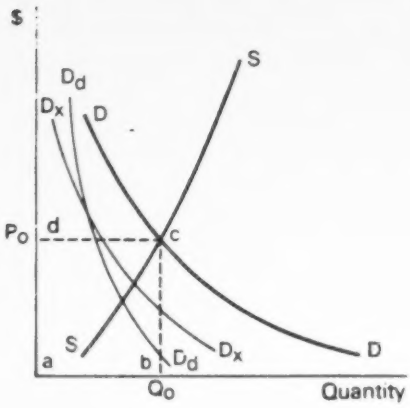

Figure 2. Production restrained and deficiency payments

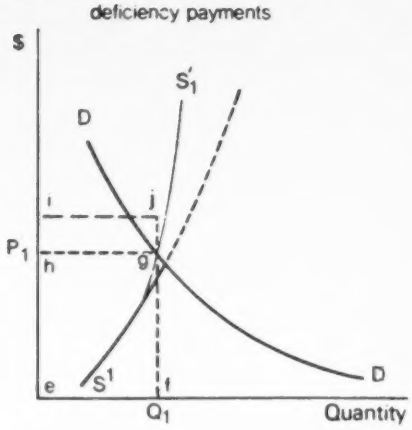

Figure 3. Sector total costs, revenue and net farm income

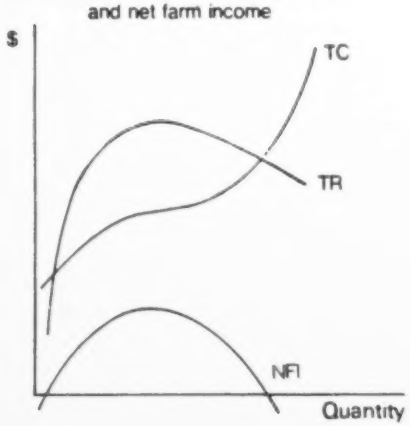

Figure 4. Net income (assured and actual) and income payment pool

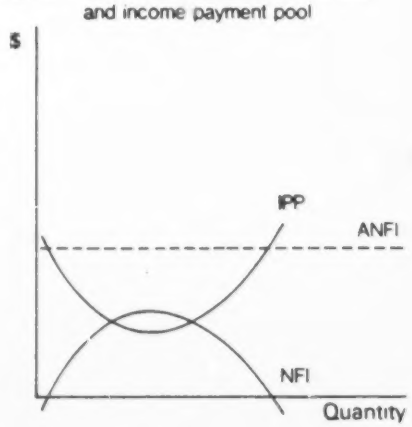

Figure 5. Tax credit per unit of product

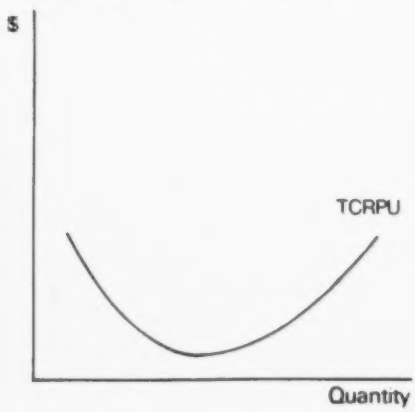

Figure 6. Supply and demand with tax credit income support program

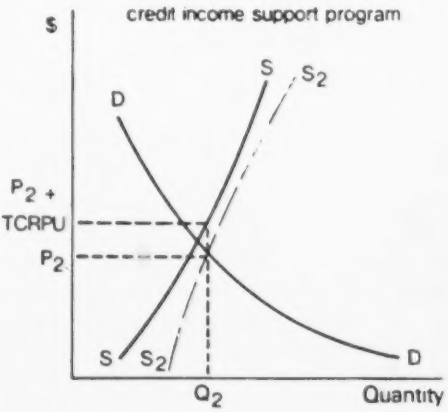

Figure 2 depicts conditions with supply control programs that restrict the use of resources for production of farm commodities as well as providing direct Government transfer payments. For the sector, economic incentives, Government payments, and Government restraints lead to $S_1S'_1$ being the effective supply and, therefore, Q_1 is produced. This quantity generates total market receipts of efgh and Government transfer payments of hgji.

A total sector revenue function (TR) consistent with the demand and a total sector cost function (TC) are depicted in figure 3, as is the net income function (NFI=TR–TC). The net-farm-income and an assured-net-farm-income (ANFI) functions are shown in figure 4. The difference between these two functions (ANFI–NFI) is the income payment pool (IPP). Thus, for each quantity there is a unique combination of total revenue, total cost, and income payment pool.

The IPP function divided by corresponding quantities equals the tax credit per unit of production (TCRPU). This TCRPU, in turn, is shown in figure 6 as shifting the sector supply function from SS to S_2S_2 as the tax credit offsets a portion of costs. Thus, Q_2 denotes the resulting equilibrium quantity produced and the market price, P_2.

This discussion assumes that costs of production (TC) are not influenced by per unit returns to production (in this case market prices and the tax credits). This, of course, may not be true. The availability of the tax credits may lead to a "bidding up" of factor and input prices. Consequently, spiral effects would likely involve higher total costs, lower net farm income estimates and therefore lead to larger tax credits (TCRPU) for any given level of assured net farm income (ANFI). Thus, we do not visualize that this approach escapes the classic problem of program benefits being bid into asset values and other production costs. The extent and process may differ from that observed with historic commodity programs such as acreage allotments and price supports. One reason for the possible difference is that individual commodity prices would not be supported with the program as outlined.

One possible way to dampen the spiral phenomena would be to exclude from net farm income calculations the costs for land and other durable factors or inputs with relatively inelastic supplies. Another would be to scale the availability of the tax credit inversely with the amount of farm sales.

Several relationships have important implications when considering the economics of this alternative. They include:

The level of the assured net farm income;

The price elasticity of product demand because of its relationship to changes in total revenue; and

The price elasticity of product supply because of its relationship to changes in total costs.

The higher the level of income assurance, the greater the incentive for production beyond that without the program. The more price elastic the sector demand and the more price elastic the sector supply the lower the Government income payment pool would be for any given level of assured net farm income.

It is likely that the greater the variability of demands, production costs, or actual production the greater would be the cost of the TCSISP since, as presented here, the program would not recoup

any losses of previous years when net farm income exceeded the assured level.

The net income associated with equilibrium quantities and prices is a crucial consideration as are the instabilities of the actual quantities and, in turn, market prices. If the sector is roughly in equilibrium, as some suggested a few years ago, or, if demand shifts were to outpace supply shifts in the coming years, as some have also expected, the proportion of years in which substantial payments would be called for would be limited. On the other hand, if equilibrium quantities are substantially greater than those consistent with politically acceptable prices and politically acceptable net farm income, payments under a TCSISP-type program would be more frequent and could be quite large unless complemented with production restricting programs.

Estimated effects

Three situations were considered to estimate the effect of a program such as the one described above:

A base situation using a set of economic parameters and program conditions comparable to 1982;

A base situation assuming a free market with the same economic parameters as with the first simulation; and

A TCSISP simulation with the same economic parameters, but program conditions and farm costs consistent with the postulated income support approach.[7]

Assumed was a congressionally assured net farm income of $20 billion ($20.3 for ease of computation) for the TCISP simulations (table 1). As expected, net income under both the free market and TCSISP simulations was less than the $19.8 billion net income for the 1982 program simulation. For the TCSISP simulation, the $4.6 billion net income from the market implies that tax credits would be the equivalent of 12 percent of farm market receipts.

TABLE 1.—ESTIMATED U.S. FARM RECEIPTS, COSTS, AND NET INCOME, COMPARATIVE SIMULATIONS

[In billions of dollars]

Category	Simulations		
	1982 programs [1]	Free market [2]	Assumed TCSISP [3]
Receipts:			
Commodity	146.9	127.9	130.4
Other	19.1	19.1	19.1
Inventory change	−1.9	−3.1	−2.2
Production costs	144.3	139.6	142.7
Net income	19.8	4.3	4.6
Income payment pool			15.7
Combined net and income payment pool	19.8	4.3	20.3
Commodity program outlays	11.7		
Tax credit per dollar farm receipts			.12

[1] Base situation assuming a set of economic parameters and program conditions comparable to 1982.
[2] Free market situation with economic parameters the same as for the base situation.
[3] $20 billion guaranteed net farm income.

[7] The FAPSIM model (Salathe, and others) was used to estimate the effects shown in tables 1 and 2.

Different assured income levels would lead to contrasting combinations of receipts and production costs and therefore different tax credits as indicated in table 2.

Implications

Implications of this approach relate to market efficiencies, ease of transition from present commodity programs and complementarities with these programs, effect on exports, and political acceptability.

Market efficiencies

Market prices would freely adjust to reflect production and marketing technologies and costs, market demands, and the expected distribution of the income payment pool. Effective per unit returns for producers would be product market prices plus the expected tax credit. However, the tax credit would be equal for each dollar of marketings. This would mitigate the distortions flowing from present programs which influence some product prices more than others. Each producer would have an incentive to adjust production to take into account changing relative market demands and changing relative production costs.

Returns to producers and other resources used in farm production could be greater than would be the case without any programs to transfer income to farm producers. Total returns with the assumed TSCISP program were about the same as under the current programs. Total tax dollar outlays (or tax receipts foregone) are also nearly equivalent.

TABLE 2.—SELECTED VARIABLES ASSOCIATED WITH SIMULATIONS OF ALTERNATIVE LEVELS OF ASSURED SECTOR INCOME

[In billions of dollars]

Variable	Income guarantee levels		
	$20 billion	$25 billion	$30 billion
Farm receipts:			
Commodity	$130.4	$131.2	$132.0
Other	19.1	19.1	19.1
Inventory change	−2.2	−1.9	−1.6
Production costs	142.7	143.6	144.6
Net	4.6	4.8	4.9
Income payment pool	15.7	21.0	26.4
Combined net and income payment pool	20.3	24.8	31.3
Tax credit per dollar farm receipts	.12	.16	.20

These comparisons of course, would vary with different assured income levels. The opportunity for farmers to more freely choose their commodities and the broader coverage across commodities differentiate the TCSISP approach.

The income support alternative, as outlined, calls for distribution of the income payment pool on the basis of market receipts. This need not be the procedure. The pool could be distributed equally to all who file a Schedule F, or to all who do not for that matter. The pool could be based on net profit from farming reported to IRS in contrast to market receipts. In the end, however, it does not appear

possible to distribute program benefits in ways that reflect production, while also not filtering and perhaps altering the signals of markets that reflect consumer demands and producer supplies.

A number of variations on the payment pool approach could be incorporated as to commodity coverage. Tax credits could be given only to producers of certain highly desired products or producers particularly advantaged or disadvantaged. Limits or multipliers could be introduced to shrink or to increase calculated credits for taxpayers of certain characteristics. The more that the commodity lists are narrowed, however, the more that market signals will be distorted, the more likely that exports will be hampered, and the greater the inefficiencies that will remain in U.S. agricultural production.

It was not possible in this paper to give attention to refining the meaning of farm marketings. For example, the Schedule F takes into account "livestock and other items bought for resale." It would seem necessary to give close attention to this matter. With particular definitions of marketings a tax filer could qualify for tax credits by buying and selling farm products without transforming them in any significant way.

Ease of transition

Expenditure of Government money for a direct payments program would compete with expenditures for other commodity programs. The deficiency payments program for wheat, feed grain, rice, and cotton would be potentially duplicative if both programs exist. However, it would not be administratively necessary to discontinue any of the current Government programs that benefit producers before initiating a tax credit sector income support program. The benefits of the other programs could be taken into account in estimating sector receipts as is now done estimating net farm income.

Effect on exports

Present programs involve transfers to producers and higher market prices to U.S. consumers and to importers of U.S. farm products. The sector income support approach, assuming these other programs were discontinued, would allow prices to seek levels whereby production cleared the combined domestic and international markets. The effect on the volume of exports would be positive. It is not clear, however, if the effect on the total value of exports would be positive. This would depend on the mix of commodities exported and their respective export demand elasticities.

Political acceptability

The direct benefits of current programs are much greater for some commodity producing groups than for others. The more highly benefited commodity producers' groups could view a program of the type described in this section as a threat to their benefits.

Other commodity groups might oppose it as well, recognizing that current programs, in certain cases, discourage the shift of resources out of the commodities supported. Without supports focused on particular commodities, a portion of the related resources

would go out of production altogether, but importantly, at least some of the displaced resources would shift to products not directly supported. Producers of these other products might therefore see such a program as eroding the indirect benefits they realize with current programs.

An income support program, in years in which net farm income from marketings was less than the assured level, would involve consumer prices lower than free market prices and lower than prices consistent with current commodity programs. Some political attention has been given in the past to rapid increases in market prices such as occurred in the 1970's. But, significant political benefit is not evident to us in a shift of a portion of food costs from the market to Government expenditures and with consequent higher taxes or a higher general price level. Thus, it is not clear that substantial consumer support would develop for a TCSISP type program.

Such a program could lead to (a) enhanced effectiveness of congressional budget procedures and (b) increased awareness and understanding of the competitiveness among producers of different farm products. For example, Congress might decide on a target for net farm income, decide on the maximum amount for a payment pool, and appropriate an amount consistent with the anticipated deficiency in net farm income. In turn, Congress might give considerable autonomy to congressional agricultural committees to take money from the pool for producers of selected commodities as conditions warranted. This could be accomplished by using the money for programs similar to present ones, or by giving some producers tax credits differently, say double, from what they would be if producing other commodities. Such an approach would enhance the awareness of producers that to give money to some preempts giving it to others. It would also encourage a greater recognition of spillover effects of particular commodity programs onto the economic conditions of other commodities.

In summary, a farm income support program using tax credits as outlined, would assure producers as a whole a certain level of net farm income. With such a program, market prices would freely adjust and markets would clear. Producers would have incentives to take into account changing relative market demands and changing relative production costs. Producer returns would be greater than without any programs to transfer income. However, they may not be greater than with present programs. It is important to note that effects of the program would be closely related to how the pool is distributed. It need not be distributed according to marketings; thus income redistributions inversely related to farm size or some other criterion could be applied. Opposition to such a program would likely arise for several reasons including loss of subsidies currently targeted to specific commodities and fear of increased production of commodities not currently subsidized.

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AGRICULTURE IN A WORLD SETTING

(By John M. Hunter*)

I believe that U.S. agriculture should be considered in a world setting including such considerations as U.S. world leadership in both an agricultural and political context with a firm recognition of the ideological difference between the free world, the Communist nations and uncommitted "Third World" countries. U.S. agricultural capacity should certainly be used postively, consistently and constructively in this ideological arena to benefit the free world as well as ourselves as a nation.

Therefore, U.S. programs should be directed toward maintaining U.S. productive capacity without substantial underemployment of agricultural resources to meet:

1. Domestic needs.
2. Cash exports.
3. Noncash exports to needy recipients, perhaps with the exclusion of these exports from "free market" supplies.

Our Nation should compete vigorously in foreign markets to keep and maintain our share of these exports. If necessary, we should adopt a two-price system where growers would receive a domestic price and export price utilizing subsidies as a device to assure a price to U.S. growers equal to cost of production yet allow an export price sufficiently competitive to clear the market of free grains.

Now back to the topics on which you requested comments:

I. Government

Government should take positive leadership and establish long-term programs to meet the genuine needs of farmers and the consuming public.

II. *Program operation*

The role of Congress should be to establish long-range policy to be manifested in legislation that will make it possible to establish farm policy along lines I have outlined in my introductory comments. Allowance should be made for necessary legislation adjustments to meet short-range goals.

III. *Policy*

Policy direction in the 1985 farm bill should include the concept that I made in my introductory comments in this letter, particularly to firmly establish long range U.S. agricultural policy in a world

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setting which will maintain and increase our world leadership in both agricultural and political matters.

IV. *Costs*

U.S. agriculture should be kept at nearly maximum production capacity to meet both domestic and world needs. Some concern should be given to occasional production shortfalls and thus carryover stocks should be available for domestic requirements. The export market, both cash and noncash, should be used to dispose of production. This may prove more cost effective than current programs such as PIK that have attempted to reduce production by use of acreage controls.

V. *Production controls*

I believe that production controls are morally unsustainable in a world where there is a need for agricultural production. We all recognize, however, that production on erodible lands in the long run dissipates our production capacity and restraints in these circumstances are justifiable. The world should know that we are a dependable supplier and that price alone should not be the sole motivating factor for delivery. Subsidy, if necessary, should be an accessible tool and be less costly that alternatives.

VI. *Domestic policy in a world economy*

U.S. agricultural policy should be a worldwide setting as I have already outlined. The United States should develop long-term programs to reaffirm and maintain our leadership.

VII. *Trade*

The United States should meet unfair trading practices of other countries vigorously and in kind, if necessary, with participation of the U.S. Treasury. Trade agreements should be developed with competitive trading partners to maintain a healthy domestic agriculture and meet our regular and continuing long-term-export commitments.

VIII. *Resources and technology*

Unquestionably there is a need to develop perspective resource management programs including those touched by agriculture. Technological innovations may slow down the resource dissipation but only put off to the future the inevitable. Very possibly we need to carefully look at the organization within the Government of the management of resources. A careful realignment of responsible governmental layers to overcome redundancy that has come about through successive legislative attempts resulting in piecemeal program development. I am speaking of USDA departmental reorganization which would put operations more nearly in an up-to-date context.

AGRICULTURAL ECONOMICS BEYOND THE FARM GATE

(By Leo Polopolus*)

The industrialization of American agriculture during the past three decades has diminished farm numbers and the farm population. While total agricultural production has increased, the input, finance, service, processing, transportation, and distribution industries surrounding production agriculture have now become the dominant economic components of the food and agriculture system. The transformation of production agriculture from a major economic sector of the U.S. economy to minor status has been in progress since the founding days of the Republic, but has received impetus in the post-World War II era via the technological revolution involving mechanical, chemical, biological, and managerial innovations on the farm. What has emerged from this process is a highly interdependent subsystem of the U.S. economy for providing food and fiber for consumers at home and abroad.

Agricultural scientists, including agricultural economists, have tended to place undue emphasis upon the technological, economic, and social aspects of production agriculture as the food and fiber system changed over time. While public investments in research and education for the production side of agriculture are admittedly inadequate, the lack of attention to the technological and economic problems of the balance of the food and fiber system is deplorable. In terms of value added, employment, or other measures of economic importance, the food and fiber system beyond the farm gate is roughly twice that of production agriculture. More significantly, productivity and inflation problems beyond the farm gate have affected national economic performance more persistently than gyrations in the farm economy per se.

The overall purpose of this paper is to challenge agricultural economists and policymakers to think about some important issues facing our contemporary economic system. This emphasis does not mean that farm production economics is unimportant or unnecessary. It is argued, however, that changes are needed within the agricultural economics profession to deal with a large number of significant economic problems and concerns beyond the farm gate.

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Society will receive significant net benefits from increased public and private investments in research and education of the food system beyond the farm gate.

Situation

Increases in food marketing and distribution costs have contributed substantially to the inflationary spiral in the United States since 1972.

Productivity of the food marketing and distribution section of the U.S. economy has performed poorly relative to onfarm productivity.

While the total food-marketing bill is twice the value of farm level production, public investments for marketing and distribution research and education in the U.S. Department of Agriculture (USDA) and land-grant universities are quite meager when compared with agricultural production research and education.

Private sector research and development in the food system beyond the farm gate has become increasingly oriented toward product proliferation and market promotions as opposed to productivity and efficiency considerations.

Potential beneficiaries

Farm producers would benefit from improved marketing and distribution efficiency by increasing derived farm level profits for given consumer demand levels. Also, improved efficiency of marketing and distribution could enhance the competitive position of farmers so as to maintain or expand their markets at home and abroad.

Marketers and distributors of food could benefit from improved technologies and management systems that stimulated firm level productivity, lowered unit costs, and improved profit margins at least in the short run.

Consumers would benefit from marketing system efficiencies that lowered real food costs in the longer run.

Action needed

It is proposed that the Congress of the United States promote the general welfare, reduce inflation, and improve productivity of its agricultural and food resources by enacting special funding for food systems research and education. The aim of the legislation would be to develop new technologies and management efficiencies beyond the farm gate via a coordinated effort among the land-grant universities, USDA, and other appropriate agencies and institutions.

Response to supply siders

Public expenditures on research and education for an improved food-marketing system will likely induce investments within the private economy which will deal directly with the following national economic concerns as expressed in the President's 1982 economic report to the Congress (Reagan): laggard productivity (via technical

change in the food system) and the inflation problem (via lower real food prices at consumer level).

The public investments in research and development on the food system, along with private investments for technological change, will not add to the regulatory burden of Federal Government, a serious concern of both Government and industry.

IMPACT OF FOOD MARKETING UPON INFLATION

There has been a dramatic increase in consumer food prices in recent years. The index of consumer food prices increased an annual average of 13.6 percent in the last decade, 1972–81 (table 1). This double digit inflation rate in consumer food prices is in sharp contrast to annual average increases of less than 5 percent for retail food prices in the previous 20-year period beginning in 1953, except for 1969 (Reagan, p. 295). Also, retail or consumer food prices increased at a somewhat greater rate than the increases in nonfood prices in the recent decade of 1972–81.

In aggregate dollar terms, the price tag on marketing domestic farm foods increased from $82.4 billion in 1972 to $183 billion in 1980, or an increase of 12.6 percent per year.

Another measure of the enlarged economic importance of food marketing is illustrated with the farm retail spread. The farm-retail spread measures the difference between the price paid by consumers for food products and the farm value. In 1973, 56 cents of each food dollar expended by consumers was for marketing services. By 1981 this had increased to 65 cents of each consumer food dollar. Stated another way, the farmers' share of the retail food dollar has dropped from 44 cents in 1973 to 35 cents in 1981 (USDA, USDA ERS).

The inflationary impact of the food-marketing system can be demonstrated more clearly with what happened in 1981. Last year, farm prices increased only 1 percent, while marketing costs increased over 10 percent. Overall, retail food prices increased 8 percent. In some years farm prices actually decline, while consumer food prices increase because of the inflationary forces within the marketing-distribution sector.

Food-marketing costs tend to be inflexible, while farm prices are quite often volatile. Labor costs, for example, account for almost one-half of food-marketing costs. Collective bargaining agreements have a direct influence on the food-marketing wage bill. A lower overall inflation rate translates into lower cost-of-living wage adjustments and hence reduced food-marketing costs. Also contributing to the inflationary situation has been increased prices for packaging materials and containers, transportation costs, and energy costs for food manufacturing and marketing.

TABLE 1.—INCREASES IN THE INDEX OF CONSUMER PRICES, 1972–81

[1967–100]

Item	Index of consumer prices		Percent average annual increase, 1972–81
	1972	1981	
Food at home	121.6	269.9	13.6
Food away from home	131.1	291.0	13.6
All food	123.5	274.6	13.6
All less food	125.8	270.6	12.8
Total CPI	125.3	272.4	13.0

Source: USDA ESCS. Data provided by Paul Westcott.

In terms of commodity groups, the inflationary impact of food-marketing costs has been most pronounced for cereals and bakery products, red meats, fresh fruits, and fresh vegetables. For these commodity groups, the increase in the index of retail costs has been greater than the increase in farm value over the 1972–81 period (table 2). However, for eggs, poultry, processed fruits and vegetables, and dairy products, the increase in farm value indexes exceeded the increase in the indexes of retail costs for the 1972–81 period. Thus, there are considerable differences among commodity groups in terms of the source of food price inflation.

PRODUCTIVITY OF THE FOOD-MARKETING SYSTEM

Historically, productivity gains in food marketing have not been as pronounced as those in farming. As is well known worldwide, the growth of farm level productivity in the United States has been based upon the application of science and technology generated largely by public research investments. The role of the cooperative extension service has been a vital part of the delivery of technical information to the farmer. While variations in farm level productivity have occurred by geographic location, commodity, and whether the innovation adopted was biological, chemical, mechanical, or managerial, the record of productivity growth of U.S. agriculture in terms of output per man hour or output per unit of aggregate input is undeniable. Overall, farm productivity in terms of output per man hour grew at an annual rate of 5.5 percent during the 1970's.

The story is quite different in the food marketing-distribution system. Most components of the system are afflicted with laggard or declining productivity growth, particularly for food transportation, food retailing, food service, and some food-processing industries (Eddleman, Teigen, Purcell). For example, productivity growth has declined significantly in the rail and truck transportation sector since 1973. The decline for truck transportation has been caused at least in part from reduced speed limits and higher energy costs.

Labor productivity in the food-manufacturing sector varies considerably by industry group. In wet corn milling and soft drink manufacturing, increases in labor productivity have occurred since 1973. No significant growth in labor productivity has occurred in the meatpacking, sugar, candy, and breakfast cereal industries.

Output per employee in the blended flour industry actually declined more than 4 percent per year since 1973.

For retail food stores, as well as eating and drinking establishments, output per hour of labor is now significantly below 1973 levels. Longer shopping hours for essentially the same volume of sales is a major factor.

TABLE 2.—U.S. RETAIL COSTS AND FARM VALUE COMPARISIONS, 1972–81

[1967=100]

	Retail cost index			Farm value index			Ratio of retail cost increase to farm value increase
	1972	1981	Increase	1972	1981	Increase	
Red meat	129.3	257.8	128.5	133.2	235.1	101.9	1.26
Poultry	109.5	198.6	89.1	108.2	212.7	104.5	0.85
Eggs	107.6	183.8	76.2	104.1	212.1	108.0	0.71
Cereal and bakery products	115.9	271.1	155.2	112.4	217.7	105.3	1.47
Fresh fruit	126.3	286.1	159.8	121.3	251.6	130.3	1.23
Fresh vegetables	130.7	287.4	156.7	130.4	279.9	149.5	1.05
Produce, fruit, vegetables	122.7	271.5	148.8	127.5	288.7	161.2	0.92
Fats and oils	114.9	267.1	152.8	110.0	261.3	151.3	1.01
Miscellaneous produce	114.3	264.0	149.7	117.9	272.9	155.0	0.97
Total	121.3	257.1	135.8	125.1	248.1	123.0	1.10

Source: USDA ESCS. Data provided by Dennis Dunham.

TABLE 3.—PRODUCTIVITY GROWTH RATES FOR THE U.S. FOOD-MARKETING AND DISTRIBUTION SECTORS, 1958–72 COMPARED WITH 1973–79

	Percent annual productivity growth rate (output per man hour)		Direction of change
	1958–72	1973–79	
Food manufacturing:			
Fluid milk	3.8	3.5	Reduction.
Preserved fruits and vegetables	[1] 2.7	[4] 1.9	Do.
Flour and other grain products	[1] 4.1	4.9	Increase.
Cereal and breakfast foods	[3] 2.2	[4] 0.8	Reduction.
Rice milling	[3] 3.6	[4] 2.5	Do.
Blended and prepared flour	2.9	[4] −4.0	Negative.
Wet corn milling	[3] 4.0	[4] 9.8	Increase.
Prepared feed	[3] 4.4	[4] 2.2	Reduction.
Raw and refined cane sugar	3.5	[4] 1.5	Do.
Beet sugar	3.4	[4] 0.6	Do.
Candy and confectionary products	[1] 3.6	[4] 0.2	Do.
Malt beverages	[1] 5.9	5.3	Do.
Distribution:			
Intercity trucking [5]	[3] 2.6	[4] 1.1	Do.
Intercity trucking [5] (general freight)	[3] 2.1	[4] 1.4	Do.
Railroad (car miles)	[1] 3.8	0.8	Do.
Bakery products	[2] 2.7	1.0	Do.
Retail food stores	3.0	−1.0	Negative.
Eating and drinking places	1.2	−2.4	Do.

[1] 1954–72.
[2] 1957–72.
[3] 1963–72.
[4] 1973–78.
[5] Output per employee.

Source: Eddleman, Teigen, Purcell, p. 6a.

Documentation of the laggard and negative productivity performance of the food manufacturing and distribution sectors is available from the work of Eddleman, Teigen, and Purcell and summarized in table 3.

Problems of measuring productivity in the marketing sector

It should be pointed out that labor productivity measures are neither reliable indicators of short-run changes in efficiency nor long-run changes in technology (Ruttan 1959). What is needed ideally is an index which expresses output in relation to all inputs, not simply the labor input. For the food distribution sector particularly, there is a problem of dealing with the variable and generally low quality of labor services. The measurement of productivity of the food system is a topic worthy of attention by agricultural economists and not addressed adequately in this paper.

Causes of laggard productivity growth

There is a large number of factors contributing to the relatively poor productivity performance of the food marketing-distribution sector. Some of the more important factors include reduced or deferred investment in capital goods because of high interest rates, reduced investment in research and development in the private sector, a low level of public research and development investments, high energy costs, Government regulations, rising administered and negotiated wages in excess of labor productivity growth, and labor restrictions caused from collective bargaining agreements. With the national unemployment rate approaching 10 percent and corporate profits plunging, there are signs that wage demands of organized labor will become nullified by larger concerns for the economic viability of the corporate entity.

The downward trend in productivity growth is also related to the market orientation of the food industry. As noted in the report of the National Commission on Food Marketing in 1966, and still applicable today, the industry's market orientation "helps to explain why farm retail spreads for numerous foods are wide and increasing; why firms grow, often by merger and acquisition, beyond the size necessary to produce efficiently; the relative market power of various groups in the industry; the high rate of product innovation; and the survival of distribution methods that use labor and equipment wastefully" (U.S. National Commission on Food Marketing, p. 92).

The consequence of slower productivity growth in food processing and distribution sectors has been increased rates of food price inflation. Even if food price inflation is dampened from market forces, there is an obvious need for more efficiency and productivity growth in the food system beyond the farm gate. These objectives could be accomplished with public research and development investments for the food-marketing system of the order presently expended for agricultural production, science, and technology.

Selected examples

There are numerous opportunities to improve productivity and achieve lower real costs for the food system in the longer run. Most of the opportunities, however, involve or require close coordination

between different economic interests in the farm-to-consumer linkage. Often, changes in one segment of this system cause economic losses to another segment of the food system in the short run. Also, productivity gains will require better cooperation with government as local, State, and Federal regulations contribute substantially to laggard productivity performance.

Food transportation services. There is a great need to improve energy and labor productivity in food transportation, particularly for perishable foods and, hopefully, with increased use of a revitalized national railroad system.

Standardization and unitization. There are wasteful inefficiencies and a lack of adequate standards for packaging and handling food products, particularly fresh fruits and vegetables. Through improved unitization, we can improve the efficiency of intermodal shipments of food products; that is, shipments that move across truck, rail, barge, and ocean freighter modes.

Energy efficiency through new food products. Basic research can lead us to new foods which provide a nutritious diet at lower food cost, plus reduced national energy consumption. Ultra-high-temperature milk is a promising new product example along this line.

Market information technologies. Recent advances in computer technology and communication systems provide an almost unlimited number of alternatives for improving market information for buyers and sellers. Applications of electronic marketing at farm, wholesale, and retail levels are already beyond experimental stages.

While there are many other useful examples of opportunities for improving the productivity and efficiency of the food system, the main point is that agricultural economists have an important role to play in analyzing the economic feasibility of alternative systems, developing industry and national policy guidelines, and evaluating prospective and realized economic performance.

THE PUBLIC INITIATIVE IN FOOD SYSTEMS RESEARCH AND EDUCATION

Total investment in public sector agricultural research and development (R&D) was estimated to be $1.2 billion in 1979 (Ruttan 1982). Somewhat surprisingly, R&D investments in the private sector of agricultural inputs, food processing, and distribution are over $2 billion, or almost twice the public agricultural research level. Also, private sector R&D has grown more rapidly over time than public sector agricultural research. The bulk of private sector R&D activity, however, is focussed upon the development of new products as opposed to efficiency or productivity considerations. The social sciences receive only 5 percent of private sector R&D expenditures, as most of the R&D resources are utilized by engineers and physical scientists (Ruttan 1982). Thus, there does not appear to be an adequate level of interest and/or incentive for the private sector to invest in technologies which improve the efficiency or productivity of the food system.

Given the national public policy objectives of productivity growth and slower rates of inflation, it would appear obvious that the U.S. Government would provide at least adequate "seed money" to de-

velop a program of food systems research and development. Such a visible or coordinated program is lacking.

While the food-marketing sector accounts for two-thirds of the total agribusiness economy and it continues to grow over time relative to the farm production sector, Federal investments for R&D in the more limited area of postharvest technology have actually declined in real dollars. Federal postharvest technology expenditures decreased from $75 million in 1966 to $64 million in 1979, adjusted to 1967 dollars. Offsetting the real decline in Federal funding for postharvest technology research in the Agricultural Research Service and the agricultural experimental stations has been a real increase in State support from $14.7 million in 1966 to $23.8 million in 1979, adjusted to 1967 dollars (Phillips).

What meager postharvest technology research that is executed at the U.S. Department of Agriculture and the State experiment stations is concentrated on farm-level or first-handler problems. Generally ignored in the postharvest R&D effort are the productivity and efficieny problems of the transportation, wholesaling, storage, retailing, and food service establishments. Moreover, the role of economics and management science is relatively minor to the total public investment in postharvest technology when compared with the biological and physical sciences.

A recent survey of agricultural economics departments in the United States revealed that, on a national basis, marketing has received fewer research resources over the past decade compared with farm management/production economics, land use, rural development, and natural resources (Stanton and Farrell). Within a declining total marketing effort, the agricultural economics marketing research agenda is weighted heavily toward farm gate marketing, price analysis, and supply and demand studies.

IMPLICATIONS FOR THE PROFESSION

As professional agricultural economists, we need to pay attention to the present day relevance of our discipline, as well as provide effective guidelines for future sustenance and growth. Despite increasing diversity of subject matter and clientele, we have increased our numbers and strengthened our professional ties over time. Past AAEA President R. J. Hildreth attributes the common bond of our breed to three elements: (*a*) focus on problems of the food system, rural communities, and natural resources; (*b*) use of economic logic; and (*c*) empirical emphasis (Hildreth). One of the greatest tributes to the professional agricultural economist came from Wassily Leontief in his presidential address to the American Economic Association. Leontief acknowledged the close collaboration of agricultural economists with agronomists, home economists, and sociolgists: "While centering their interests on only one part of the economic system, agricultural economists demonstrated the effectiveness of a systematic combination of theoretical approach with detailed factual analysis."

In my view agricultural economics beyond the farm gate requires the application of our unique methodology as defined by both Hildreth and Leontief. There is a special need to reacquaint ourselves with firm-level problems beyond the farm gate. For historical rea-

sons we have tended to think of the post-farm-gate food system as solely the field of marketing. In fact, however, the subdisciplines of finance, management, and accounting, among others, are also crucial to the solution of firm and industry problems beyond the farm gate.

Methodological framework

Part of the challenge of a broader role beyond the farm gate is the need to develop a useful theoretical framework for empirical analysis at firm, industry, and sector levels when perfect competition is not an appropriate model. Even for farm firms, the changing structure of agriculture is rendering our atomistically competitive model less useful as the days go by. Unless we adapt to the reality of changing market and institutional environments, we will find our toolkit for problem solving increasingly sterile.

In view of the unique problems of productivity and efficiency in the food system beyond the farm gate, there is a special need for the further development of the relatively new field of systems economics. Systems economics attempts to summarize the vast micro and macro universes of the complex, socioeconomic-ecologic world (Don G. Miles, private communication, 16 Oct. 1981). Hopefully, the application of systems economics could provide alternative recommendations for improving the food system in terms of national economic objectives of a reduced inflation rate and increased labor and energy productivity.

International relevance

The problem of productivity and efficiency of the food system beyond the farm gate exists in virtually all countries of the world. The need for increased research and development expenditures is particularly acute for developing countries with rampant domestic food price inflation and inefficient methods of food assembly, transportation, storage, processing, pricing, and retailing.

Teaching programs

In terms of future demand for professional agricultural economists, the corporate agribusiness world offers tremendous employment potential. On the other hand, it is my view that the domestic market for research-oriented Ph. D. recipients has entered a zero growth phase, particularly from the point of view of academic and Government employment. What is lacking in most masters and Ph. D. agricultural economics programs is a set of courses on managerial economics of firms beyond the farm gate. We need to take a serious look at what employers need and what special expertise we have to offer. If we fail to alter our graduate programs accordingly, agribusiness firms will increasingly shun traditional agricultural economics masters and Ph. D. degree holders in favor of business school products. The MBA in agribusiness programs at the University of Santa Clara and Harvard Business School are successful examples of training programs geared to the needs of corporate agribusiness firms.

Labor relations and labor management

With labor accounting for almost one-half of the food-marketing bill, one of the major areas of concern of the profession should be personnel management and labor relations. Labor economics is noticeably absent from most teaching programs, and it is virtually nonexistent in research and extension programs. The exceptions involve research and/or extension programs on farm labor in the major farm-labor-demand States of California, Texas, and Florida, plus some isolated labor management programs associated with food distribution.

Multidisciplinary emphasis

Given the locus of national concerns involving productivity growth of the food systems and retail food price inflation, a new combination of collaborators is needed. Food scientists, engineers of several types, postharvest technologists, management specialists, and computer scientists could become the nucleus of new research and extension teams with agricultural economists. Certainly, what is needed is a strengthened relationship with scientists in other disciplines who operate regularly with problems of society beyond the farm gate.

Forming new alliances with scientists outside traditional colleges of agriculture present formidable budgetary and political problems for well-intended agricultural economists. This problem would be solved if the American Agricultural Economics Association, plus a cast of supporting agencies, firms, and individuals, could convince Congress of the need for special grants for improving food system productivity and lessening inflation. If legislatively charged, the experiment station directors could then be required to allocate funds and provide general administration for agricultural economists, food scientists, engineers, computer scientists, plus other specialists not normally associated with colleges of agriculture, for example, accountants, industrial psychologists, labor economists, and attorneys.

Regional and national institutes

As noted by three previous presidents of this association, our land-grant college system does not permit the maximum use of professional skills across State lines (Castle, Stanton, and Farrell). Unfortunately, even though most agricultural commodities and associated products are marketed across State and international boundaries, agricultural economists generally have difficulty in obtaining funds and authority to conduct research outside the home State.

What is obviously needed is a set of specialized regional research and education centers located strategically in producing and consuming regions of the country. Some centers could specialize in food-system-oriented problems of commodity groups, for example, dairy, meats, grain fruits and vegetables, while other centers could specialize in specific subject matter areas, for example, transportation, wholesaling, retailing, postharvest technology, interregional and international trade, and consumer behavior. A national institute of food systems in the U.S. Department of Agriculture or a new independent agency could be charged with integrating, coordi-

nating, and conducting national studies. The primary purposes of the regional centers and the national institute would be to seek improvements in food systems technology and management for the benefit of participants of the system—farmers, marketers-distributors, and consumers.

CONCLUDING REMARKS

A program of increased public investments in the food system beyond the farm gate is not without a cast of critics. The Office of Management and Budget (OMB) and the Office of Technology Assessment (OTA) are particularly negative to increased effort in postharvest R&D at public institutions. At the hub of the criticism is the argument that public institutions are not appropriate vehicles for product development. Admittedly, there has been a low rate of commercial adoption of new products developed at land-grant universities and in USDA utilization laboratories, primarily because of the lack of exclusivity to patents and market franchises. This problem does require some innovative thinking to permit fundamental research and development in truly new food products, while still providing incentives for ultimate commercial adoption through exclusive franchises and royalty arrangements which satisfy both public and private interests.

The overall thrust of my proposed initiative in food systems R&D beyond the farm gate, however, is not to proliferate food products, but to provide impetus toward lowered real costs in food marketing and distribution through technology and management. Productivity growth and marketing efficiency require increased attention in such areas as postharvest handling, processing, raw product assembly, transportation at various stages, wholesaling, storage, retailing, food service, exporting, importing, and pricing at all levels. The new age of computer technologies also provides unlimited opportunities for improving product and input market information and thereby pricing and marketing efficiencies. Recent developments in demand theory and household economics are quite relevant to an overall evaluation of alternative food systems from the consumer perspective.

Modified food systems will likely alter market and industry structural patterns and the nature of competitive forces. Hopefully the end result will be the reduction or elimination of laggard productivity and inefficiency of the food system beyond the farm gate as important factors in the persistent price inflation of the U.S. economy.

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THE IMPACT OF MONETARY POLICY ON AGRICULTURE, AGRIBUSINESS AND RELATED ACTIVITIES

(By Joseph C. Purcell*)

This paper addresses the impact of monetary policy on agriculture and agribusiness during the 1979–83 period from a historical perspective.

Prior to 1979 monetary policy received little attention in the debate focused on farm policy, food policy and related public policy issues. As a primary role of government in a free enterprise system is that of a referee to insure equity (parity) among participants in the economic system, much of the farm policy debate during this century has revolved around the persistence of farmers to over produce resulting in chronic low prices for farm commodities. The inverse conditions of scarcity and high farm-commodity prices have also surfaced. Public concern about possible food shortages occured mostly during wartime—WW I, WW II, Korea, and Vietnam.

The major exception to concern over food scarcity, except in wartime, followed depletion of grain reserves in the United States through massive sales to the U.S.S.R. in 1972 and was further aggravated by short falls in global production during the 1972–75 period. Actions on the part of the OPEC oil cartel further fueled the food scarcity syndrome through disruption of oil supplies and escalating prices of energy. The unprecedented increase in farm commodity exports from the U.S.A. during the mid-1970's exerted an upward pressure on commodity prices—especially grains and oilseeds. Subsequently, an unprecedented aura of prosperity in American agriculture prevailed. However, the increasing price of grains and oilseeds contributed to a severe cost/price squeeze in the animal sector resulting in liquidation of a large part of the cattle herd during the years 1975 through 1978.

Another part of the ag-food policy debate during the half-century from about 1930 to 1980 revolved around the goal of an adequate diet for all Americans. Initial efforts to provide all citizens with adequate food related to surplus commodity disposal.[1] Several food aid programs followed including school milk, school lunch and breakfast, subsidized exports to the needy abroad, and finally the costly and highly controversial food stamp program.

In essence, ag-food policy of the past half-century revolved around the two simple goals of equity or parity for American farmers, and adequate food at affordable prices for American citizens. Emphasis on the goal of parity for farmers has assured an ade-

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[1] Surplus disposal may have in fact been the prime motivation for the disposal programs.

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quate food supply for consumers at affordable prices. The problem of 1983 is that of providing employment for all consumers in order to have effective demand.

MONEY, CREDIT, AND MONETARY EXCHANGE

Another vital role of government is that of creating money, and providing guidelines and regulations for a functional and equitable monetary exchange system. People create wealth in the form of goods and services that provide necessities of life, comfort, convenience and pleasure. Money and a monetary exchange system are necessary though to avoid the inconvenience of direct barter and exploit the high levels of productivity associated with specialization.

Rising economic affluence (economic development) is certainly a goal of both society and government. The direction of change rather than the level of economic activity is all important. Increasing employment and rising labor (physical and mental initiative) productivity undergird rising economic affluence.

Another role of government is to provide a sound credit system to foster economic development. An advancing economy must provide credit to innovators and entrepreneuers. The U.S. Government has played a vital role in advancing the productivity of American agriculture by providing or underwriting credit for enterprising farm operators to acquire land, buildings, machinery, fuels, seeds, feeds, and industrial chemicals. Credit is also essential to advancing productivity in the farm supply, and the postfarm sectors of the food, fiber and kindred industries.

Money and credit are not ends in themselves but rather are catalysts necessary for specialization and exchange. Investment funds (credit) are provided by savings, and credit created by a central banking system. Savings represent foregone or postponed consumption with real (net of inflation) interest being the carrot that induces savings. A saver expects to increase his buying power at a later date through real interest earned on investments. A business manager such as a farmer, expects to sufficiently increase productivity through the use of credit to repay borrowed funds plus interest. Declining productivity and consumer wealth or real buying power occur when the expectations of both savers (creditors) and investors are not realized.

Scarcity and value

Value accrues to goods and services because they contribute to the necessities of life, comfort, convenience and pleasure of people, and because they are relatively scarce. Things are scarce because they are not readily available in nature, and/or the effort and capital required for their creation. In this context, money is no different from other commodities. The more difficult it is to create money, the more valuable it is.[2] A sound monetary unit is one that retains its buying power in terms of useful goods and services over time.

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[2] Money may be scarce due to constraints such as the gold standard, and general monetary policy.

Governments aspire to protect the value (soundness) of their money through constraints on the creation of money. One way to achieve this objective is to tie the value of the monetary unit to things that are scarce in nature and/or difficult to create. The gold standard that undergirded U.S. monetary policy until 1933 in the domestic economy and until 1971 in international trade simply stated that a dollar was equivalent to and redeemable in a specified unit of gold—1/35 ounce from 1933 to 1971 for foreign dollar holders.

Abandonment of the gold (and to some degree the silver) standard removed the major natural constraints on the creation of money. Money, like all other commodities, loses value as it becomes more abundant. Saving is discouraged when the buying power of money decreases over time—especially after net real interest is taken into account.

Price inflation and monetary policy

Price inflation reached alarming levels during the 1970's for the first time during peace time since the formation of the U.S. Government—disregarding the Confederacy and its currency. It is obvious that price inflation depends on an increasing supply of money—that is, money becomes less valuable in terms of goods and services. Debate revolves around whether price inflation causes the creation of money, or whether the creation of money causes price inflation. The prevailing evidence suggests that inflation can be reduced through constraints on the money supply but the penalty is apparently high levels of unemployment and widespread bankruptcy.

Prior to October 1979, monetary policy was that of creating money necessary to accommodate targeted interest rates. This policy was executed largely through the discount rate for funds borrowed from the Federal Reserve System by member banks.[3] This is the rock bottom wholesale price of money. However, commercial banks charge customers a higher rate to cover their costs, interest paid on funds from other sources, risks and profits. Numerous interest rates exist at any point in time depending on size of loans, duration of loan and expected risk.

Federal Reserve prevailing discount rates were rather stable from 1931 through 1979 varying from a low of 1 percent from 1937 to 1947 to a high of 8 percent in 1974. Rates were much more variable expressed in real terms—the prevailing rate adjusted for year to year changes in the Consumer Price Index. Real Federal Reserve

[3] Although the discount rate is what the public sees and largely believes to be the main focus of monetary policy, it is Federal open market operations that is the prime vehicle for regulating money growth and credit. The discount rate is a signal of the intent of the monetary authority and there have been extended periods when it was not an accurate signal. In some instances the discount rate reached a ceiling that was several points below the levels reached by alternate money market rates. The Federal Open Market Committee regulates the money supply primarily through the sale and purchase of securities on national money markets. A sale draws down checking accounts of commercial banks as purchasers checks to the fed are cleared, reducing the funds which serve as reserves for bank loans. A purchase has the opposite effect, injecting fed checks into deposit accounts of banks, potentially enlarging the supply of loanable funds. Banks adjustments to these surplus or slack positions affects the rates at which they lend and borrow funds from one another (the fed funds rate) and eventually impact all other money market rates. The discount rate is only adjusted to keep sembalance of alignment with these rates (during certain periods). The discount windows obviously use other means to govern the volume of lending to commercial banks during "nonaligned periods."

discount rates varied from a high of 12.81 percent in 1932 to a low of −13.36 percent in 1947 between 1931 and 1979.

A drastic change in monetary policy of the Federal Reserve System occurred in October 1979. Between October 1979 and roughly July 1982, the Federal Reserve Policy was targeted money growth in the range of 2.5 percent to 5.5 percent annually, without regard to interest rates; that is, interest rates were governed by the demand for and supply of funds. Without an announced change in policy, there appeared to be a gradual reduction in Federal Reserve discount rates, regardless of money growth rates, between July and November 1982.[4] The policy is unclear in early 1983. The best guess seems to be some compromise between the goals of targeted interest rates and targeted money growth rates.

MONETARY POLICY 1979–82 AND AUSTERITY IN THE AGRICULTURAL-AGRIBUSINESS SECTORS

The Federal Reserve monetary policy of October 1979–July 1982 was associated with unprecedented high interest rates along with highly variable and unpredicatable rates. Cause-effect relationships among economic variables are at best estimates. Although the change in policy was implemented in October 1979, there was probably a 2 to 3 month lag before it began to bite in terms of the level and variability in interest rates. Federal Reserve discount rates (New York) ranged from 10 to 14 percent between January 1980 and July 1982 compared with a low of 1 percent and a high of 8 percent between 1931 and 1979.

Two things are a direct result of the targeted money growth policy of October 1979–July 1982: (1) High and highly variable prevailing interest rates and (2) a substantial reduction in price inflation as measured by the Consumer Price Index.[5] Relatively high U.S. interest rates led to an increase in the value of the dollar relative to foreign currencies and precious metals—especially gold and silver. Foreign investors converted other currencies and metals to dollars and invested in the more profitable U.S. money markets. The relative increase in the value of the dollar increased the price of American exports in foreign markets and decreased the price of imports in American markets. Cost of travel was reduced for Americans in foreign countries but the cost of travel increased for foreigners in the United States. Moreover, high and variable interest rates created an aura of uncertainity and apprehensions which tended to stifle innovation and stagnate productivity.

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[4] There has been a blurring of the boundaries between highly liquid funds (demand deposits)—traditional M1—and less liquid time and savings deposits—the added components in traditional M2—since interest rate deregulation. For example, many savings accounts and money market funds also permit unrestricted checking which give them demand deposit liquidity while traditional M1 has grown rapidly since July, M2 has grown more slowly. There has also been unusual movement between expiring all-savers accounts and checking account categories. Although this has occurred during the suspect period prior to an election, timing may be coincidental and that the decline in interest rates reflects weak money demand rather than an attempt to favor.

[5] The payment of interest in checking accounts by financial institutions adds a "front end" cost to funds of lending institutions that has undoubtedly permanently raised the cost of money to the borrowing public because these costs must be passed along to customers. That increase in interest rates is not a part of Federal Reserve monetary policy in the usual sense. Some banks choose not to pay interest on checking accounts although their competitive position is weakened by that choice.

Uncertainty and apprehension among business persons together with high and variable interest rates slowed investment and lead to increasing unemployment and declining real aggregate consumer income in both domestic and export markets. Fears of unemployment and falling real income pressure consumers to substitute lower cost foods for preferred foods and food services. This reduces the demand for basic farm commodities such as grains and oilseeds in the domestic market. Reduction in demand exerts a downward pressure on commodity prices.

Due to the highly competitive structure of the farm sector and the necessity for maintaining cash flow to meet scheduled debt payments, the shortrun response of individual producers to waning market demand is an increase in output exerting further downward pressure on farm commodity prices. The problem may be further aggravated by favorable weather. This is in contrast to the response to declining demand in the industrial sector characterized by closing production units and furloughing employees.

As noted, high U.S. interest rates increase the value of the dollar in terms of foreign currencies and increases the price of American goods in foreign markets. This leads to a reduction in export demand for farm commodities and a further downward pressure on commodity prices.

Falling net farm income leads to a reduction in demand for items used in production. Purchases of the more durable farm inputs are postponed. This resulted in a virtual collapse of the farm machinery market leading to financial crises in both the manufacturing, and the distributing and servicing sectors of the farm machinery industry during 1980–83. There is less immediate reduction in demand for fuels and chemicals that enhance production but these will eventually be affected as farm units fall.

Handlers, processors, fabricators, transporters, storers, and distributors of farm commodities are also heavy users of credit. Credit is necessary for holding inventories, meeting payrolls, payment for fuels and utilities, purchase of packaging materials, purchase of specialized machinery, and so forth. Costs are increased by rising interest rates. Apprehension and uncertainty is increased by highly variable interest rates. Austerity and apprehension in the marketing system exerts a further downward pressure on farm commodity prices and slow improvements that would reduce marketing costs. Thus, both farmers and consumers are adversely affected by high and unstable interest rates for funds available to the marketing system. On the positive side, some farmers might benefit from lower land values and rental rates, and lower feed prices.

Creditors gain in the short run by unusually high interest rates—that is, a transfer of wealth from debtors to creditors. In the, longer run, however, creditors are also vulnerable to high and unstable interest rates. As the wealth creating mechanism falters—that is, high unemployment and widespread bankruptcy—both business enterprises and consumers default on loan (interest and principal) payments. Rising foreclosure rates exert a downward pressure on the value of land, buildings (commercial and residential), machines, and other assets that serve as loan collateral.

The evidence is rapidly mounting that excessively high and unstable interest rates and/or the unavailability of credit will lead to

a virtual collapse of a substantial part of the economy including the farm sector, the farm input industries, and the food-fiber fabricating and marketing system. Widespread bankruptcy accompanied by falling values of real estate and other real assets would eventually lead to a collapse of the monetary-credit system.

Conversely, unbridled price-inflation would eventually lead to a collapse of the monetary-credit system. It is obvious that the economy—with a high degree of specialization and exchange—could not function under such a scenario. The lesson is clear that a solution to the price-inflation problem does not lie in targeted money growth rates simply because the consequences are not acceptable.

The root cause of price inflation is insufficient competition on the supply side of the market and strong competition on the buyer (consumer) side of the market. Strong competition among sellers exerts a downward pressure on prices. Conversely, strong competition among buyers exerts an upward pressure on prices—that is consumers compete with each other for goods and services offered. Weak competition among sellers is attributed to: (1) Labor unions and other systems that set salaries and wages which causes labor costs to rise faster than labor productivity; (2) cartels (such as OPEC); (3) industries that engage in branding and advertising (nonprice competition); (4) special interest organizations that set fees for services such as medical and dental services; and (5) a government that legislates to accommodate special interest lobbyists which further weakens competition. These are the problems that are to be addressed if price inflation is to be bridled without creating high levels of unemployment and widespread bankruptcy.

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PERSPECTIVES FROM STATE DEPARTMENTS OF AGRICULTURE

ALABAMA

(By Albert McDonald*)

From an overall standpoint I believe that U.S. farm policy over the past 40 years has been effective. Although problems exist, we have the strongest agriculture in the world and most of our farmers are prosperous. I would not council radical change in our farm programs.

I think it is essential that we continue Government programs for nonperishable commodities produced by American agriculture. The most important provisions of a successful farm program in order of priority are as follows:

1. Governmental assistance in research, production, and marketing methods. Marketing should be further assisted by favorable credit programs and possible subsidies for agricultural exports.
2. Production control should be provided through acreage control when necessary. Monetary incentives will be required to insure compliance with programs.
3. Insurance against crop disaster is absolutely essential. Disaster programs which have been discontinued should be reinstated and designed to work with the Federal crop insurance program. The FCIC program alone has not proven to be satisfactory because of its failure to meet the needs of the majority of producers.
4. Soil conservation programs should be continued and more money appropriated to provide for conservation practices on a cost-share basis. A long term diversion program for marginal soils should be provided for.
5. Reserve stocks of storable commodities should be provided for at a level that would insure a sufficient reserve for domestic use in case of a disaster. The reserve should not be large enough to significantly depress commodity prices.

*Commissioner, Department of Agriculture and Industries.

CALIFORNIA

(By Clare Berryhill*)

California Perspectives on the 1985 Farm Bill

Agriculture plays a significant role in the economy of the United States. A healthy agricultural industry has a strong positive influence on other aspects of the economy and contributes heavily to our international balance of payments. Unfortunately, the significance of agriculture has not always been recognized by the American public and their governing bodies.

In spite of its size and importance, agriculture is not a cohesive industry. Agriculture, in many parts of the Nation, mainly consists of the historical basic commodities such as corn, hogs, beef, dairy, wheat, cotton, and tobacco. Other parts of the Nation, while producing some of these basic commodities, are not dominated by them. Generally, these other commodities are referred to as specialty crops. For example, California produces nearly 250 different commercial crops, most of which fall into the specialty category. This diversity highlights the difficulty in establishing a common national agricultural policy. What might appear to be a reasonable policy for the basic commodities could be totally inappropriate for specialty crops and vice versa. In the past, this dilemma has been addressed to a large extent by ignoring the specialty crops.

We believe national agricultural policy should be designed as consistently as possible to include all agriculture, not just a few selected parts. In saying this, we recognize that any significant change in direction will generate pressure from those groups who have enjoyed existing benefits and protection.

Such policy should also recognize that it cannot, and should not attempt to guarantee the profitability of any portion of agriculture. To do so fosters the misallocation of valuable resources by camouflaging marketplace signals. The end result is usually another crisis that requires another policy exception or creation of a new policy.

Some policies of the past may no longer serve the needs of agriculture or the public. We encourage Congress to establish a new, coordinated approach to national agricultural policy. In order to maintain a viable agriculture, we must ensure that our foreign policy is consistent with our agricultural policy.

In addition to these general comments, we offer for consideration the following concepts in more specific areas:

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PRODUCTION INCENTIVES

Present and past policies have both misguided the U.S. farmer and disrupted the foreign market on which he has come to depend. Artificially high prices encourage production while pricing us out of the world market. Changes in administrations together with new stop-gap measures create a pendulum effect that bewilders the public and even the farmers for whom it is designed.

A long range market-oriented program is needed that will incorporate both domestic and international needs. A steady supply will be produced if the market sends steady, consistent signals in the form of prices that provide the U.S. farmer with the income his hard work and his asset ownership deserve.

A dependable farm policy will be one that allows freedom of choice in crops and does not discriminate in favor of one block of producers over another.

Policy must establish adequate reserve supplies to guarantee a flow of commodity during low production cycles so all established markets can be maintained. Much thought must be given to creation of a governing body capable of managing those reserves within the long-term framework of the policy and free from short-term-political whims. Greater emphases should be placed on establishing stable domestic and foreign market programs and less emphasis on production control mechanisms. It should also provide that simultaneous with production controls, we do not have policies to encourage development of marginal lands and/or keep poor managers in business.

Once policy is established, it should not be violated to satisfy some short-term need in foreign policy—such as the Russian grain embargo.

TARGET PRICES

Establishment of "target prices" or support payments has been deemed necessary to protect American growers from short-term-market aberrations. Policy that considers worldwide supply potential must be established to reduce or eliminate dependence on support payments as a means of maintaining U.S. agricultural incomes. When agricultural products are given to undeveloped countries or provided as food for the needy, the costs of such programs should be established as foreign aid or social program expenses rather than farm support costs. Such Government aid for the needy should be formulated into long-term policy so farmers understand what the total demand will be over a specified time.

Policies must be established that specify which costs a producer should recover from support programs, recognizing that different regions would have different support prices. The goal cannot and should not be to make farming riskless to the producer.

INTEREST COSTS TO AGRICULTURE

U.S. fiscal and monetary policies are closely linked to the global economy. Therefore, how the Federal Reserve responds to current U.S. budget deficits could have more impact on U.S. farmers than any other single factor of production of marketing.

The United States must balance Federal expenditures with Federal revenues. The future of our U.S. economy and perhaps the world economy depends on it.

The Federal deficit has affected farmers in several ways because high interest rates:

1. Affect operating costs and create cash flow problems;
2. Reduce or eliminate capital investment;
3. Affect the value of our dollar in world markets which reduces agricultural export potential;
4. Encourage foreign investments here which reduces available foreign investment dollars; and
5. Create additional credit problems for countries with heavy debts and makes it more difficult for other countries to import U.S. agricultural products.

Although there are problems with high interest rates, improper action to correct high interest could fuel inflation that could be more of a problem to the agricultural and world economies. Federal action taken on taxes, interest and inflation could mean more to U.S. agriculture than the entire 1985 farm bill.

FARM CREDIT

The Federal Government's lending agency for "last resort" agricultural loans is the Farmers Home Administration (FmHA). In addition to providing financing for farmers who have experienced losses due to natural disaster, FmHA appears to sustain inefficient farming operations.

FmHA credit programs must be carefully coordinated with existing or proposed farm price support programs. For example, there should not be low-interest programs for other than disaster loans at a time when there are support prices for commodities that are in excess of necessary reserves.

The feasibility and impact of these ownership and operating loans on the entire agricultural economy must be analyzed when loan funding determination policies are formulated. FmHA's credit programs should be limited to providing disaster relief so that this form of Government assistance returns to providing a "hand up" rather than a "hand out" to agriculture.

ELIGIBILITY REQUIREMENTS

In an effort to make farm programs more consistent, cross compliance between participation in a program of support payments and other programs is necessary. When land is idled through a paid diversion program, the land should not be converted to other crops while the producer is receiving financial assistance.

Crops should be allowed, and in some cases required on land to prevent soil erosion or protect watersheds. The use or harvest of such crops should not be allowed if competition is created with other crops.

Administering this eligibility principle will require many separate parts of the Government's agricultural administration to work together. This kind of cooperation could lead to considerably less confusion and reduce criticism from farmers who now have to deal separately with Federal, State, and county agencies. Farmers and

ranchers would greatly appreciate a "one-stop office" Government farm program that combines and coordinates the many regulations and supports now handled by several offices.

EXPORT MARKETS

Agriculture's ties to world markets go beyond agricultural exports and we must concentrate on each element affecting export markets. Many countries are so interdependent that what happens to one country affects them all. For example, EEC policies are beneficial to some countries while having a negative impact on U.S. agricultural exports.

We must establish policy that will enhance the U.S. export position by expanding and improving the operation of world markets. The United States needs to be viewed as a steady and reliable source of supply of food and fiber, affected only by crop fluctuations and not political expediency. To do otherwise, encourages more rapid development of foreign agricultural resources at the expense of our political export markets.

We need to increase mutually advantageous bilateral trade agreements. We need policies that provide for reciprocal arrangements with our trading partners. We can no longer view foreign markets as merely surplus disposal outlets. We need to accommodate the needs of our customers abroad by producing the kind of products they need, want, and can afford to buy. We must also be certain that our Government export officials involved directly with foreign countries, understand the language, customs and beliefs of those countries in which they are expected to function.

To the extent possible, we must encourage the elimination of nontariff trade barriers. Bilateral and multilateral trade negotiations on a frequent basis are needed. Care must be taken to protect the interests of agriculture, including specialty crop producers, when concessions are given or restrictions are imposed on imports or exports.

The generalized system of preferences (GSP) provides special treatment for products from developing countries. Care must be taken to make sure that GSP concessions are not given at the expense of individual farm products.

RESEARCH

Present conditions in California agriculture and agriculture nationwide continue to warrant research dollars. Environmental and economic issues are becoming increasingly complex and are playing a more integral role in today's agricultural industry.

There is currently a trend within USDA to redirect research dollars away from applied research and toward more long-range basic research. The arguments pro and con are age old and the lines are difficult to draw. USDA's position has been that State and Federal research dollars be directed toward basic research and private industry should fund applied research.

We are concerned about the direction Federal research programs are taking. We feel applied research areas such as plant and animal production, soil and water conservation, and commodity delivery to market are best carried out by public researchers. Private

industry is unable to see such projects through from the initial stages to the final product. Private research which is conducted typically springs from a data base developed by State or Federal research projects. It is also important to note that knowledge gained or products developed through publicly funded research is shared industrywide and ultimately benefits the consumer.

It is also of concern that USDA is prioritizing its research dollars based upon the relative acreage committed to specific commodities. Using this criterion, California will be subject to drastic cutbacks. Contrary to most other States, California agriculture is highly diversified, making most of this State's commodities minor in acreage yet clearly important to the U.S. and world economies. For many specialty crops, California supplies the majority of the production of U.S. and world consumption.

State and Federal research dollars should, therefore, continue to support both applied and basic research goals. However, while there should be a balance between these research goals, we must continue to address the applicability of research results at the farm and/or market level. Communication between industry groups and Federal agencies should continue in order to identify problems which need to be addressed and to get the maximum benefit of all research resources and results.

ENERGY POLICY INTERFACE WITH AGRICULTURE

Our energy policy must continue to give a priority allocation of existing fuels to agriculture during times of short supply. Fuel is needed for production agriculture and its service industries, for example, transportation, processing, and so forth. Failure to provide for a priority allocation would stifle agriculture and disrupt the flow of food for domestic consumption and into foreign markets. Such a happening would not be in the best interest of the Nation.

FLORIDA

(By Doyle Conner*)

I. Government intervention in agriculture should be limited; it should avoid any expansion of Government support of prices through any kind of mechanism and gradually work toward some disposition of those as it has done with the tobacco program making it the financial responsibility of growers. Government should expand programs designed to enhance nonchemical controls of insects, diseases, fungi, viruses, and weeds. Both farmers and consumers will benefit from this. Continued efforts to maintain strength in the institutions which have been created to support agriculture with research, technological developments, consistent grades and standards, and information are essential to the continued strength of agriculture. The only other area of expansion of Government programs should be to marketing and meeting foreign competition in world markets, but Government in doing so should not attempt to establish a two-tier price arrangement or use intervention like that of the European Community.

II. Congress should establish broad priority goals and not attempt to legislate specific program details such as it has in past in an attempt to outguess what the economic situation will be 2 or 3 years down the road. Examples of bad results from this are seen in the dairy and wheat programs; a better way is illustrated by the soybean program.

III. Recent historical development of American agriculture indicate that the question of size and economic viability of farms should be addressed. There is excellent evidence that large farms do not especially need Government support and that it becomes more of a windfall for them—in view of the fact that Government support payments are based on the per unit production system (the more bushels, the more payment) and not specifically designed to benefit those who need the most help. Also, policy should address the problem of disaster emergency (should emergency loans be issued to farmers who could have had protection through Federal crop insurance?); re crop insurance, policy should be used to encourage farmers to participate. Policy should encourage that farmers who have to hold land out of production for any reason in order to qualify for any kind of Government assistance or shelter program be responsible for good soil and water conservation on any land so held out of production. Cross compliance should be the quid pro quo.

IV. The cost effectiveness of a program cannot be calculated without a consideration of the anticipated benefit. There are two

*Commissioner, Florida Department of Agriculture & Consumer Services.

alternatives to Government intervention to achieve cost effectiveness, and neither is likely to be acceptable: total noninvolvement of Government, with the economic system determining who will survive and prosper; or total centrally planned and price-guaranteed agriculture as in the socialist countries. If Congress would not mandate specifics but instead allow the economic system and the administrators to deal with the program, we would not have encountered such high carrying costs, nor would we have needed a PIK-type operation.

V. Production controls are not guarantee against large surpluses, for example, wheat. They do not address the fact of increased land productivity per acre nor the advances of modern science. This is dealt with elsewhere under I, II, and III. It is a fact that when our farmers are limited, this allows our competitors to produce more for the world market, but absent a two-tier arrangement, there seems to be no alternative if we impose controls. A program which would take the least productive, most erodible land out of production is not the answer because it does not materially reduce overall output.

VI. Most farmers know they are working in a world market situation and Congress should recognize that it cannot readily influence the internal, national-goal-oriented policies and programs of other countries. There is no way, for example, that Congress can legislate ways to overcome the European Community subsidy programs which enable Europe to compete so fiercely in the world market. (History will record how long the EC can continue to follow the CAP which is about to bankrupt and break up the EC.) Neither should the administration attempt to guide production based on what it thinks the world market will take; rather it should provide for an adequate supply of basic foods with a well-protected but limited surplus and let the market decide when farmers should expand or contract production.

VII. Fairness is a subjective issue. We think Europeans are unfair, but they think we are just as heavily subsidized as they are. So, we need to avoid the issue of fairness-unfairness and seek the freest market situation we can achieve given the national aspirations and goals of all nations. If this means that we must exercise some of the nontariff or tariff options in order to establish an equitable situation with trading competitors, so be it. We should develop a national trade policy. We don't seem to have one now. This trade policy and our domestic agricultural policy must be consistent and together they must be oriented toward the wellbeing of both the farm sector and consumers.

VIII. Inasmuch as technological innovation is likely to increase production or possibly provide new types of production through genetic change, long term we should avoid specific price levels of programs with loan and target prices mandated, or get rid of these aspects for selected crops. This may not become a crucial issue since innovation is adopted only by those who are in a position to afford it and this is a very small minority of producers at this time. Biogenetics is much more difficult of achieving goals than many people realize; new varieties developed through gene transfers and such are not going to be coming out as rapidly as we may think. As far as conservation of natural resources is concerned, we are not

doing near the job we know how to do yet. The payoff is so far down the road that farmers don't want to participate in conservation programs—but they might eventually save the agricultural system; perhaps a tax avoidance incentive system would be in order to promote conservation programs.

GEORGIA

(By Tommy Irvin*)

I. GOVERNMENTS

Agriculture's special nature does indeed deserve certain intervention on the part of both Federal and State governments. Specially, and most basically, that intervention should be the creation of a conducive climate in which the Nation and the world may benefit from agriculture's tremendous potential assets.

Doing so will require the full extent and commitment of Federal and State power to let world know the United States intends to compete in agricultural marketplaces.

The message should be clear that the United States will not allow its markets to be undercut through foreign subsidies and unfair trade practices. If necessary, we must meet subsidy with subsidy. Short of war, our Government must show potential customers they can rely on the United States as a dependable supplier; that is, that embargoes are a thing of the past.

From an environmental standpoint, resources and attention must continue to be directed toward preserving and protecting our valuable farmland and water resources. Programs which enhance conservation methods and good management and education should receive priority as should mechanisms to protect loss of prime farmland to nonfarming development.

II. PROGRAM OPERATION

Congress should continue to maintain authority in mandating specific programs when necessary, although the balance between Congress and the executive branch should be analyzed in terms of its effectiveness in meeting the needs of farmers and consumers.

III. POLICY

Anything less than positive development of an open market system for agricultural products will not serve the economic needs of the agricultural community.

Particular attention should be focused on market development and enhancement—both abroad and at home as a means of reducing out surpluses and of assuring profitability.

In seeking foreign markets, more attention should be focused on examining devices such as bilateral agreements, creative financing arrangements and barter as a means of payment. Food aid should

*Commissioner of Agriculture, State of Georgia.

also be readdressed as a mechanism for reducing surpluses and for its humanitarian purposes.

Price supports which encourage surplus production without assured markets should be reduced, since they do nothing more than falsely support markets and fan the fires of critics of farm policies.

IV. COST

American consumers need to be educated to the fact that in many cases it is they who have been subsidized. In order to keep food prices low and supplies strong, as consumers demand, farmers have needed a supplement to cover production costs and provide some kind of income.

Again, policies which assure free and open markets do more to create demand and lift farmer prices than anything else. Farmers and consumers alike must be willing to let a balance be reached between supply, demand, and price.

V. PRODUCTION CONTROLS

Farmers and the Government must again look to market opportunities when considering production controls. Certainly, "chance" and the weather play a big part in determining what the market will bear. But if more attention was focused on market analysis and development, that information would be the impetus in determining the need for production controls. If the United States reduces its warehoused surplus and no longer serves as a world residual supplier, perhaps mandatory production controls would not be necessary. They do indeed seem counterproductive when other exporting nations increase production when we mandate a decrease in ours.

VI. DOMESTIC POLICY IN A WORLD ECONOMY

Many reports show slower economic growth worldwide, a clear sign that although foreign markets are an attractive and desirable outlet for U.S. farm products, they will be increasingly difficult to sell to at the volume of current production.

Favorable worldwide weather, the severe worldwide recession, the strength of the dollar, expansionist export policies and use of subsidies by our competitors all contribute to inhibiting our markets. For these reasons, it is not realistic to expect continued high export levels over the coming decades without very serious attention on the part of our Government.

Creative financing and barter, extended debt payments, bilateral agreements, export subsidies and food aid must be incorporated into Federal farm policy if export markets are expected to remain viable and to grow.

Such policy development should be integrated into traditional policy in that it should benefit both farmers and consumers, but where necessary, major policy revisions are certainly appropriate.

VII. TRADE

Where necessary, the United States must meet subsidy with subsidy in order to regain its position as a supplier. However, since a

"subsidy war" would obviously serve no good purpose, and the goal, therefore, should be open, fair and free markets where supply and demand dictate price. Trade and tariff barriers should be exercised with the same goal in mind.

IOWA

(By R. H. Lounsberry*)

POLICY

We believe it is imperative that the policy direction of agriculture be oriented toward a free market and a healthy supply and demand situation. Realistically though, due to shifting weather factors as well as uncertain policies of other nations, there will always be a need for some involvement by government in agriculture. Nonetheless, we encourage that involvement to be held at a minimum level and that any necessary Government programs feature long-term planning.

It is vital that individual commodity supports be placed at a lower level than production costs. If support prices exceed production costs, the Government is simply stimulating the accumulation of huge surpluses, which are not in the best interest of Americans. Also, support programs should be designed to be a "safety net" and available only up to specified levels of production for any farmer or farm entity. This would lend more than rhetoric to programs to help preserve the family farm.

Since there is so much disagreement on the definition of "family farm" we would suggest limiting the maximum payment to a $50,000 Government subsidy per farming entity. Average production yield per acre in determining the maximum payments per farm should be the county by county yield bases which are established for each farm.

A $50,000 ceiling would benefit all farm operations, both large and small. A larger maximum limit, of say, $250,000 would benefit only the large producer and there appears little economic rationale for providing public monies to farms larger than the sizes needed for reasonable efficiency and adequate incomes. Currently a mere 12 percent of producers account for over two-thirds of the Nation's farm sales. Private credit markets should be augmented to provide direct loans and guaranteed loans specifically to limited-resource and beginning farmers who would not otherwise be able to compete for funds.

SOIL CONSERVATION

Whatever the farm program of the future, there must be requirements and inducements for soil conservation. Voluntary soil conservation programs are working, however, the resources available through these programs represent merely a token of those required to realistically speak to this enormous national natural resource

*Secretary of Agriculture, Iowa Department of Agriculture.

problem. We must discontinue Federal farm programs which have the effect of encouraging soil erosion, while at the same time subsidizing maximum production.

Therefore, we recommend that participation in all farm programs remain a voluntary decision, but those who do participate should be required to apply good soil conservation practices in order to be eligible for commodity supports, FmHA loans and Federal crop insurance and other benefits.

CROSS COMPLIANCE

Countrywide cross compliance regulations are reasonable. There never should be a program which calls for reducing production of a crop in one geographical area, but on the acres thus diverted allows a second crop to be produced, while in another part of the United States there are inducements in the farm program to reduce production of that second crop.

FEDERAL CROP INSURANCE

Providing Government low-interest disaster loans to farmers who do not carry Federal crop insurance arouses disenchantment in those who do carry insurance to protect themselves. Furthermore, the potential of Government aid in the event of a disaster motivates many farmers to ignore crop insurance. The ultimate decision must be made soon whether Federal crop insurance will be the national agricultural disaster insurance program or just another Federal program. In this regard, the Carter administration, with bipartisan support, made fundamental changes with the 1980 Federal Crop Insurance Act. Subsequently, the current administration, in a bipartisan effort, is supporting that concept. Together, a solid base has been formed to forge Federal crop insurance into the primary farmer disaster program of tomorrow. This can be done if: (1) the Federal Government continues to shoulder 20 percent to 30 percent of the cost; (2) the program is simplified and available to all farmers; and (3) the farmers are properly informed. We support this.

DAIRY

This is an agricultural sector which has been the center of growing controversy which has reached its culmination with the passage of the dairy compromise bill. This is history and it will serve no purpose to discuss the merits and/or demerits of this legislation.

Nonetheless, the status of the dairy industry and particularly the quantity of surplus dairy products held by the Government at the close of the 15 month payment period is extremely important. At that point in time (March 1985), it is hoped that Government expenditures for dairy products will be appreciably decreased from 1983 levels. If that occurs, it will be the opportune time to have the marketing order authority moved back to the office of the U.S. Secretary of Agriculture. On the other hand, if the payment schedules have not decreased to a sharp degree, it will be obvious that the program has not been effective. In that instance the market authority, should, again, be vested with the Secretary of Agriculture.

In summation, it will be important at the end of the current dairy subsidy program to transfer the market order control back to the Secretary. Since dairy market orders were initiated many years ago, and continuing until 1977, the Secretary had this authority, and it is our opinion that that system was responsive and it worked for the best long-range interest for dairy producers as well as for American consumers.

TRADE

We do not consider it realistic to expect continued annual export increase levels over the coming decades. The challenge will be to just maintain the export levels we have. Differing weather and economic conditions will change the mix and locale of exports almost year to year.

DEVELOPING TECHNOLOGY

One real achievement for agriculture in this country would be to promote development of a large ethanol alcohol industry. Rapid progress would be made in this regard if Congress would place an import levy and quota on imported crude oil. This would encourage industry to make investments in alcohol plants and substantially reduce U.S. dependence on foreign energy sources. It would move us away from our almost total dependence on fossil fuels to a larger portion in renewable energy sources. It would build a new industry and provide jobs. It is environmentally clean. It would enhance national security and economic stability.

The ethanol alcohol industry would have positive effects on agricultural economics. It provides a new market for agricultural products which doesn't compete with any current agricultural market at home or abroad. In the development of this new industry the farmer would have a responsibility to be in the vanguard in utilizing the high protein feed byproducts.

CONCLUSION

Thank you for this opportunity to share in problem solutions. We know there are no easy solutions—and that there could well be some short-term hardships in change. Yet these hardships are likely to become longer term as their implementation is delayed.

KANSAS

A New Approach to Developing Agricultural Policy[1]

BACKGROUND

Recognizing the needs for a new approach to agricultural policy, Governor John Carlin appointed on September 16, 1982 a bipartisan working group of agricultural leaders not identified as advocates of any particular solution to agriculture's problem who pledged to work for a common purpose in developing long term agricultural policy. The Governor met with the group prior to their organizational meeting and charged them with studying the situation, exploring alternative solutions and making recommendations to him that could be taken to other Midwest Governors. Eventually, with the backing of the heartland of agriculture, these recommendations can be forged into national agricultural policy.

The working group had 12 meetings between September 1982 and June 1983 with leaders of Kansas agriculture and selected resource people to listen to views of farm organizations, assess the agricultural situation, review data and explore alternatives.

The chairman testified before the agriculture committees of both houses of the Kansas Legislature. Representatives of the cooperative Farm Credit System were invited to explain how the system operates. A Garden City farmer, William Turrentine, who has kept extensive records and has studied agricultural problems in depth shared his findings with the group. A working retreat was held with Drs. Carroll Bottum, Willard Cochrane, and Luther Tweeten, distinguished agricultural policy specialists.

A forum was held early in the group's deliberations to obtain input from representives of Kansas farm organizations. Attending were 37 representatives of the following organizations:

State Board of Agriculture
Kansas Farmers Union
Kansas Farm Bureau
National Farmers Organization
American Agricultural Movement
Kansas Grain & Feed Dealers Association
Mid-America Dairymen
Kansas Association of Wheat Growers
Kansas Pork Producers
Kansas Livestock Association
Kansas Sheep Association
Kansas Soybean Growers Association
Kansas Corn Growers Association
Kansas Wheat Commission
Kansas Co-op Council
WIFE
United Farm Wives
AMPI
Collingwood Grain Inc.

[1] Governor's agricultural working group: Adrian Polansky, Belleville, chairman; Dick Reinhardt, Erie; Jim Kramer, Hugoton; Norm Whitehair, Manhattan; Ron Sweat, Wakeeney; Charles Hamon, Valley Falls; Jimmie Dean, Hutchinson; and Harland Priddle, Secretary of Agriculture (ex officio).

Resource People: Barry L. Flinchbaugh, Kansas State University; Paul Kelley, Kansas State University; Orlen Grunewald, Kansas State University; Joseph Hajda, Kansas State University; and Roy Laird, Kansas University.

Staff: Chuck Lambert, research associate and Geary Danielsen, graduate assistant.

These leaders were invited to visit with the group individually. Many availed themselves of the opportunity.

The working group takes its obligation seriously and serves without compensation. It adheres to the points expressed in this report and pledges to work for the adoption of the new approach to developing long-term agricultural policy recommended herein.

THE SITUATIO

Agriculture and Government reached a milestone in 1983—the 50th anniversary of the Agricultural Adjustment Act of 1933. The foundation of current agricultural policy was constructed in the depths of the Great Depression.

Since 1933 the Government has intervened into the marketplace on behalf of farmers and consumers. Prices have been supported in order to achieve satisfactory income for farmers and an abundant supply of food for consumers.

The farm programs enacted since 1933 all have had several common denominators: price supports, voluntary acreage reduction, and stored reserves. It has been implicit public policy to stabilize prices and production of farm commodities (grain directly and livestock indirectly); to shore up the troughs and level off the peaks; that is, to establish a floor for farmers and a ceiling for consumers. The current program (PIK) is similar to previous ones except for a different method of payment for budgetary purposes.

Farm programs temporarily solve the problem, but it reoccurs. U.S. agriculture suffers from periodic overcapacity given the demand for food and fiber—periodic overcapacity of land and human and nonhuman capital. Today there are approximately 2.3 million farmers, a 67-percent decrease since 1933. Net farm income has declined relatively more in the 1980's than anytime since the AAA of 1933. The problem remains to be solved.

During the decade of the 1970's U.S. agriculture took on a new dimension which has forever changed its nature—the international dimension. One out of every three kernels of grain is exported which completely changes the economic and political environment in which U.S. agriculture operates. Policies designed for a domestic market simply won't work in an international market; for example, loan rates above world prices which decrease market shares.

Many extoll the virtues of the free market, and the fact is, it is efficient. It allocates resources. It brings forth production, and rewards the fittest, but only if left alone to operate. Every time the outcome of an unstable market doesn't yield satisfactory results the Government intervenes. Agriculture insists that Government intervene on the downside. Consumer interests insist on Government intervention on the upside. So there have been varying degrees of Government intervention since the 1930's, always voluntary and in the face of declining farm numbers and declining political power of agriculture.

Historically there has been new farm legislation every 4 years. The rules have been changed and the specifics have been revised every 4 years. Thus farmers could expect a 4-year planning horizon. They at least had some idea of the rules of the game, and the economic and political environment for the next 4 years. Four

years is obviously not long enough given the amount of long-term investment required in a successful farm operation, but nevertheless is a relatively stable planning horizon.

The historical pattern has changed somewhat in the 1980's. The Food and Agriculture Act of 1981 is discretionary, leaving only a 1-year planning horizon. In 1981 and 1982 a philosophically free-market oriented administration fielded small acreage reduction programs and limited intervention. Emphasis shifted to cutting program costs and shipping our expanded productive capacity overseas. Worldwide recession, a stronger dollar, the use of food as a foreign policy tool and improved export capacity of our competitors were counterproductive to these policies.

In January of 1983, faced with record supplies and weak demand, the administration changed its policy from modest intervention to the most massive land retirement program in the Nation's history. No new enabling legislation was required. The winter wheat crop had already been planted. Kansas wheat farmers actually had a planning horizon of minus several months.

In summary, U.S. agricultural policy is short term, lacks stability and makes it impossible for even prudent farm operators to rationally conduct business over the life of their investment.

THE FUTURE

The following can be expected in the future: (1) A high degree of price variability, (2) continued periods of excess and deficit supplies, (3) increased reliance on the foreign market, and (4) less public support for costly commodity programs. Perhaps the essential variable affecting the outcome of agricultural policy is the direction of price variability. Will prices vary upward, downward, or is it possible to achieve a balance between world supply and demand? Historically the goal of agricultural policy has been to work towards a balance. But most programs have been of an emergency short-term nature rather than long term.

Arguments in favor of declining long-term food prices include: (1) The persistence of worldwide recession, (2) low incomes in the developing countries, (3) population control, (4) production capacity, and (5) techological advancements—genetic engineering, synthetics, and so forth.

Arguments in favor of increasing long-term food prices include: (1) Possibilities of long-run improvement in world income, (2) population increases, (3) easing of political tension, and (4) increasing pressure on the depleting natural resource base—water, land, energy, and so forth.

There is little agreement on which scenario will occur. No one knows. But it is certain that increased price variability will compound the problem.

The farm problem is still with us, but it has taken on new dimensions. The PIK program is another temporary emergency short-term solution. What after PIK? How can we develop a long-term agricultural policy that will lengthen our planning horizon? How can we prevent dramatic year to year changes in agricultural policy? These are tough questions with no easy answers. Many alternatives could work if they became long-term solutions rather

than stop-gap measures that are abandoned when the problem temporarily lapses.

ALTERNATIVES

Traditional alternatives include the free market and amending the AAA again. The political process has not permitted the free market to operate. When prices fall, agricultural interests ask for a Government bailout. The washout in farm numbers that would occur if PIK is replaced with a free market has been unacceptable in the past, and undoubtedly would in the future. The international dimension prevents the free market from operating. The United States alone cannot isolate or control world markets. They won't be free. Foreign governments will intervene. Overseas customers and competitors manipulate and subsidize world markets.

Amending the AAA again won't be any more successful than in the past. It's not a long-term solution, and it would prove to be extremely costly to the Federal Treasury. The bottom line on the 1981 farm bill was the cost to the Treasury. PIK is attractive because it's "old money" and the costs to the Treasury are hidden in loans to the Commodity Credit Corporation rather than visible direct cash payments. Public reaction when the true cost of PIK is known will be interesting, to put it mildly.

Clearly emerging is the need for a new approach to agricultural policy, a long-term solution and perhaps even a fundamental change in how agricultural policy is made!

In order to achieve acceptable income, U.S. agriculture must learn to operate in an international market or scale down its production plant by at least a third. Success in the foreign market requires that U.S. agriculture be competitive. The United States can expand its overseas markets by: (1) Applying loan rates to domestic use only which will avoid pricing U.S. grain out of world markets, (2) becoming a reliable supplier; that is, no embargoes for foreign policy or domestic purposes, (3) subsidizing selective sales when competition warrants, (4) eliminating cargo preference on noncompetitive U.S. vessels, (5) entering long-term international agreements including an understanding on who will hold how much stocks, (6) following a stable production policy, thus avoiding the opportunity for others to fill the gap by temporarily and drastically cutting U.S. production, and (7) establishing an Export Bank using the Federal Land Bank model to finance overseas sales.

Another novel alternative would be establishing a long-term stocks policy—a stocks corridor target—and then adjusting acreage controls and price supports accordingly. This must be a long-term program and not subject to short-term political whims.

Given the restraints on the Federal budget exploration of coresponsibility, at least partially self-financing programs like the current tobacco program and the self-help concept in the dairy industry makes sense.

And finally, since the ultimate goal is improved farm income some form of revenue insurance or a stabilization plan like the partially self-financing program in the western Canadian provinces are possibilities for the future.

A NEW INSTITUTION AS AN ALTERNATIVE

The key is a long-term solution. Recent history would indicate that a long-term solution requires a new institutional framework for making policy; a quasi-independent institution inmune from day to day political whims and manipulations.

Agriculture has long enjoyed a stable reliable source of competitive credit. Why? Because commercial lending has been supplemented by the Cooperative Farm Credit System, owned and operated by farmer associations, regulated by the Farm Credit Administration but at no cost to the taxpayer. Compare that to the multitude of problems plaguing the Government run and financed Farmers Home Administration.

Many deplore high interest rates and the variability in the U.S. money supply. But compare the degree of stability in a money supply currently governed by the quasi-independent self-financing Federal Reserve System with an alternative monetary policy controlled by the President and the Congress. The Federal Reserve set a definite goal of controlling inflation at the beginning of Chairman Volcker's term. Inflation was four-tenths of 1 percent in the first quarter of 1983. It should finish the year at less than 4 percent. This long-term policy set by a governmental institution sheltered from day to day political manipulation was accomplished in the face of wildly changing fiscal policy set by two Presidents and the Congress.

A National Food and Fiber Federation similar to the Federal Reserve System or the Farm Credit Administration with the authority to set long-term agricultural policy could provide U.S. agriculture with stability and a sufficiently long planning horizon compatible with investment decisions. Producer, agri-business, and consumer representatives would be appointed by the President subject to Senate confirmation for terms across Presidential elections to manage farm programs.

Direct control of agricultural policy would be delegated to the Federation by an act of Congress and removed from the Secretary of Agriculture and the House and Senate Agriculture Committees. This is a distinct departure from the past. It may partially change the traditional role of the long established general farm organizations and commodity groups. Thus, it could be established only after considerable understanding, compromise and a groundswell or grassroots support!

We recommend a new approach to developing agricultural policy; an approach that will produce a long-term comprehensive set of policies and a planning horizon compatible with the investment decisions required for a prosperous agriculture. We recommend establishment of a permanent blue ribbon advisory commission to the President and the Congress to be known as the U.S. Food and Fiber Commission. Creation by an act of Congress of the Commission as an independent entity in the executive branch of Government can bring long-term stability to agricultural policy.

Serious consideration must be given to: (1) expanding export sales through the establishment of an Export Bank, (2) establishing a long-term stocks corridor target, (3) coresponsibility programs partially financed by agriculture, and (4) revenue insurance to sta-

bilize family farm income. The U.S. Food and Fiber Commission can be the vehicle through which these alternatives can be developed into a comprehensive set of long-term policies.

We propose a bipartisan broad-based Commission made up of persons of national recognition respected by their peers—individuals with prestige and influence from all major segments of the U.S. food and agricultural system: producers, suppliers, financial institutions, processors, retailers, consumers, and so forth.

The U.S. Food and Fiber Commission, we envision, would be composed of 15 members serving 5-year staggered terms. Staggered 5-year terms of office would provide continuity and would not coincide with Presidential elections. Since the Commission would serve in an advisory capacity to the Congress and the President, it is important that appointing authority be broad based also.

The President, the Speaker of the House and the Majority Leader of the Senate would each appoint five members of the Commission, one per year, with no more than three from the same political party. The President would designate a chairman and a vice-chairman who would serve 5 years. The Commission would have a staff headed by an executive director appointed by the Commissioners. Commissioners would receive travel and subsistence expenses but no salary.

The Commission would have no enforcement authority but would be authorized to perform the following functions:

1. Hold public hearings, collect information and conduct studies of issues of concern to the U.S. and world food and agricultural system.
2. Identify problems in the food and agricultural system, analyze alternative solutions, make findings of fact and recommendations.
3. Submit recommendations for current and long-term food and agricultural policy to the President and the Congress.
4. Evaluate current food and agricultural policies and farm programs.
5. Evaluate U.S. food trade and assistance policies including international agreements.
6. Serve as a clearinghouse for food and agricultural policy information.

With time and the appointment of recognized statesmen in the food and agricultural system, the Commission can provide a new approach to developing workable long-term food and agricultural policy.

The recent role of the National Commission on Social Security Reform is an operational example of how this process can work. A broad-based commission made up of respected influential citizens developed and guided a solution to the social security crisis through the political system.

The history of the political process dealing with development of food and agricultural policy in the United States and elsewhere demonstrates that there is no "single best" approach to the problem. We believe, however, that greater progress can be achieved in developing a more rational policy if the role of farm commodity groups, general farm organizations, consumer groups, and others is

left to their existing well-defined role of representing the consensus of their respective groups in the political process.

General farm organizations, commodity groups, and other organized groups having an interest in the broad array of food and agricultural policy could develop a more unified hearing on the national political scene through various discussions now emerging. One example is the National Agricultural Forum which is attempting to serve as the communication linkage among organizations.

We believe a U.S. Food and Fiber Commission will complement the political process and the role of existing organizations. Policymakers and interest groups will welcome policy options developed by an independent body that they respect.

Agriculture operates in an international market. The United States cannot control international policy nor dictate price and terms of trade. Thus it is obvious that the State of Kansas can only influence food and agricultural policy—it cannot set policy. We envision support for the U.S. Food and Fiber Commission from working groups similar to the Kansas group established in other Midwest States. The Governors and legislative and agricultural leaders of these States would take the lead (many have already been contacted) in establishing grassroots support. They would then develop and take the plan to the national level and press for enabling legislation.

If current trends continue, by the year 2000, 90–95 percent of U.S. food production will occur on less then 200,000 farm units. This would be a sufficiently small enough number to develop and implement a consensus agricultural policy. Now is the time to begin. It will take compromise and individual and interest group sacrifice for the good of the whole.

Everyone is welcome to their own set of values but not to their own set of facts.

MAINE

(By Stewart N. Smith*)

1985 Farm Policy From a Northeast Perspective

The Northeast and especially New England is often overlooked in debate over agricultural policy because of our relatively small agricultural base. However, agriculture is important to the Northeast, to New England, and especially to Maine. Food production and processing in Maine exceeds 10 percent of the production of economic goods. If the forestry industry is added to that we are talking about nearly 40 percent of the economic goods produced in the State of Maine. Beyond these statistics, we are a State that is rural in nature and people in Maine have a strong desire to maintain that rural character. But we need healthy, prosperous rural communities if our people are to enjoy the benefits of these rural areas. Within this context there are some specific policy directions which should be emphasized in the 1985 farm bill to create stronger rural communities, not only in Maine, but throughout the country.

Rural development strategy. I would start by suggesting that we need to rethink the present rural development strategy. That strategy, in my opinion, is misdirected. It depends heavily upon the concept of enterprise zones to attract business firms into rural areas. It relies upon expansion of agricultural exports as a means of bolstering farm income in rural America and it proposes significant increase in the amount of data collected in rural America. All of these initiatives have a place in providing support to rural communities, but as the building blocks of rural development strategy, they fall woefully short. We need a policy that does not rely upon providing every rural community with the opportunity to participate in large-scale-industrialized society. We need a policy which recognizes differences between our urban and rural communities and builds upon rural strengths rather than imposes urban solutions upon our rural areas.

We need a strategy which supports the entrepreneurial capability that currently exists in rural America. That entrepreneurial capability will not be released with an enterprise zone emphasis which is primarily a tax subsidy program. We need, at least in rural Maine, a program which provides information, capital, and assistance in organization for our rural entrepreneurs. Some of the basic programs are already in place; they simply need more resources and more emphasis. Let's not try to make rural America

*Commissioner, Maine Department of Agriculture, Food and Rural Resources.

into an industrial America. Let's use the resources and advantages that our rural communities have and build upon them.

Agricultural land policy. One of the essential pieces of a rural development strategy is a strong agriculture, and that agriculture is going to depend upon maintenance of our agricultural land base. That base is fast eroding. We are losing agricultural land for three reasons: First, some of it is eroding and becoming less and less productive. Second, some of it is being converted to nonagricultural uses. Third, especially in Maine over the past 40 years, much has been abandoned. We need programs which address each of these three causes of farmland loss. The first is being addressed reasonably well with current soil conservation programs. I encourage continued support of those programs; reducing or eliminating them is going to eventually erode our land base and, therefore, the agricultural productivity in this country.

Much more could be done at the national level to address the conversion problem. The National Agricultural Land Study and resulting legislation to restrain development by the Federal Government itself on our agricultural lands is a start, but it falls short of what should be done at the Federal level in terms of the Government's own development projects.

In addition, much more could be done in assisting State and sub-State groups to address the agricultural land conversion issue. Many States, especially in the Northeast, have allocated substantial amounts of money to maintain their agricultural land base through the purchase of development rights. That kind of program is probably too expensive for most States to utilize in any major way, and that technique may not be necessary to maintain our agricultural base. Alternatives, like transfers of development rights and agricultural districts which have both restrictions and benefits, can play an important role in preserving agricultural land. Although these programs need support from the Federal level, that support would not require a great outlay of funds.

Finally, the Federal Government could do much more in addressing the abandonment issue. Maine is considering a policy of agricultural districts where State-level agricultural support could be targeted to assure that agricultural production stays viable into the future. A major component of that State support is to improve the marketing opportunities for those producers within agricultural districts.

Marketing assistance. The Federal Government can do much with its existing programs to support improved marketing opportunities. The research and education system of the Agricultural Experiment Stations and the Cooperative Extension Service can be instrumental in providing special assistance to producers in agriculture districts, especially in marketing. That system has, in the past, concentrated much of its research effort in the production area, and the result is demonstrated every day by the ability of the American farmer to produce. Unfortunately, not enough effort has gone into developing efficient market systems which provide consumers a wide choice of foods and produce a better return to the farmer. Instead, the marketing margin now accounts for two-thirds of the price consumers pay for foods. Both research and extension resources should be used to improve that marketing system, and I

would encourage Congress to mandate that kind of support in the 1985 farm bill.

There are several existing marketing programs in USDA which can be very helpful and deserve special attention. One of those that has been extremely beneficial to New England and the State of Maine is the Federal/State market improvement program administered by the Agriculture Marketing Service in USDA. Because it is a small program it has not had much support from either past administrations or this one. However, it is an important program. It has helped develop better marketing systems, both domestic and export, in the potato industry. It has assisted in the development of innovative market structures for fresh vegetables, and it has helped provide transportation options for our potato farmers. If targeted to key sub-state agricultural districts, this program could continue to be extremely beneficial to rural development in Maine.

We, in Maine and New England, need more cooperative development. We have been slow to use the cooperative structure for marketing our agricultural products. In 1980, USDA provided a one person cooperative field office in New England and that person was extremely helpful in assisting forestry, farming, and even crafts producers to form co-ops. Unfortunately, that office has been closed, apparently because the Cooperative Service sees itself as a supporter of large existing co-ops rather than small emerging co-ops. That's a policy that should be stood on its head, and Congress should move in this direction in the new farm bill.

Marketing assistance can also be provided through support and encouragement of marketing orders. Marketing orders are extremely helpful to especially small producers who are too numerous to develop marketing information and provide quality control on an individual basis. By using marketing orders, industries in Maine like the emerging broccoli industry, the apple industry, and the Russet potato industry can establish quality standards and promotion for the product which meets those quality standards. Marketing orders have been under attack for some years now, and perhaps there are some instances in large, established industries where they are being abused. This is not the case in Maine and market orders are indeed helpful to our relatively small producers.

Farm credit programs. In addition to marketing, the 1985 farm bill should redirect policy in the area of credit. The State of Maine is overly dependent upon the Farmers Home Administration (FmHA) for financing our agriculture. FmHA now provides somewhere between 50 and 60 percent of the agriculture financing in this State, and the Farm Credit Service another third. That means that the private banks have substantially withdrawn from agricultural lending. In recognition of this situation the 111th Maine Legislature enacted an innovative program that allows the State to aggressively promote the development of our natural resource industries by developing lending programs which encourage private banks to reenter agriculture financing. The program also provides some technical assistance to the banks and borrowers. However, that program will not succeed if it cannot utilize tax exempt revenue bonds. It is critical to agriculture and rural development in Maine and probably in the Northeast to have tax exempt revenue bonds available to restructure a financing base for agricultural ac-

tivity. Although FmHA has a very legitimate and crucial role to play in agriculture, agricultural activity should not be totally dependent upon a Federal financing program. That is not good for either our agriculture or for the Federal Government.

In addition, FmHA should be provided with the resources it needs to service its loans. FmHA started as a provider of credit to those who could not get credit in the private sector and those borrowers generally received good servicing and direction from FmHA. Over the years the ability to service those loans has diminished, and today FmHA does not have the resources to provide the support necessary to make those new farmers successful. FmHA should have that capability even if it means reducing its programs.

International trade. Our international trade policy is certainly of key concern to the U.S. agricultural community. The impact of that policy is felt in the Northeast and in Maine as much as it is elsewhere in the country. We need free and fair trade. Areas that can produce most efficiently should do so and we should purchase those items that we cannot produce as well. However, that concept breaks down when less efficient producers get subsidies that allow them to price their product below cost. We have seen that strategy work for the Canadian potato farmers as they have substantially increased the volume of potatoes coming into this country, reducing the markets available to our own farmers. That approach also affected the poultry industry. Practically all the U.S. export markets were lost when the European Community started subsidizing its poultry production. It should be made clear to those countries that subsidize their exports that we will not tolerate that kind of economic disruption. I would encourage Congress to direct the USDA to use subsidies if necessary until other countries discontinue their use of subsidies. We want open trade but we want fair trade.

Structure of price support and adjustment programs. Turning from a New England to a national perspective, I would like to comment on the basic agricultural price support and production adjustment programs. These programs have a great impact upon what we produce in this country and how we can sell it. Farmers make their production plans based upon the prices they are likely to receive, and those prices are generally affected by our basic agricultural policy.

It appears to me that USDA has the technical expertise to adequately operate the programs that we have at our disposal. This includes the commodity loan programs, the deficiency payment program, the farmer-owned reserve program, and the production adjustment programs in whatever form they may take. The problems of overproduction, massive buildups, expensive Federal outlays, and then drastic adjustments to bring our production back into balance are not caused because the programs are inadequate. The problems are caused because there is a great deal of volatility in the way these programs are administered. This volatility is due to changes in agricultural policy from administration to administration and even within administrations because of budget constraints which change from fiscal year to fiscal year.

I don't believe that we can continue to develop farm policy in this manner without raising a great deal of havoc on the farm and

great cost in terms of human resources and human spirit. Too high loan rates and target prices draw new people into farming, increase the price of land, and then a policy which provides lower real loan rates and target prices drives those young people with heavy indebtedness out of business. It's time to take the basic farm policy out of the ever changing, year-by-year political arena and place it in a more independent agency where redirection comes more slowly.

I would encourage Congress to give serious consideration toward establishing a separate agency to determine a basic commodity program. That agency might be modeled after the Federal Reserve Board where appointments are not coterminous with the President, where policies would overlap administrations; where clear direction would be given; and where time would be allowed for actual implementation of a particular policy. Such an agency could determine program variables to provide an optimal level of production, with a reserve program to make foods available during years when yields fall below estimates. A sound, stable farm policy could be developed. Such an agency could also better serve our export function. Administratively it would be a relatively easy matter to lift those responsibilities out of USDA since they are now resting primarily within the CCC. The USDA could then go about its business of being concerned with the allocation of income within agriculture but would leave the general establishment of overall price supports and production levels to a separate agency which is not subject to the immediate political pressures of our current system.

Such a program would provide more stable income to our basic commodity producers. Young people would get better signals about when to go into farming and when to stay out. Creditors would have a better sense of sound lending policy and grain users, like our poultry, dairy, and livestock industries in New England and Maine, would face more stable prices and a better estimate of product availability. Similarly, export markets would be better served by this more consistent policy.

We have the tools; we have the programs. It is simply a matter of getting the basic decisionmaking into an agency which can look at the long-term impacts and make the difficult decisions without being confronted on a day-by-day basis with political pressures. This would be the most significant change in our farm policy since it was put in place in the 1930's. It is one that is probably overdue. I would encourage this committee to write such a redirection into the 1985 farm bill.

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MARYLAND

(By Wayne A. Cawley, Jr.*)

Regarding Government's role in agriculture, I believe that one area of activity which needs special attention relates to conflicts or alleged conflicts which develop between the agricultural industry and other segments of our society. Too often, it seems, Government reacts too quickly and too strongly in favor of the consumer, especially with respect to issues relating to health and the environment. Frequently this reaction proves detrimental to the best interest of both groups. Government should be more deliberate in its dealing with such conflict to be sure that allegations, both pro and con, are based on solid evidence rather than special interest group biases or on inadequate and/or biased research.

In the area of program operation, I believe that both Congress and the executive branch must exercise some authority. Congressionally mandated programs are seemingly less susceptible to political whims and Congress, generally, is more receptive to inputs from the agricultural community in developing programs of a more acceptable and workable nature. However, some executive branch authority is important to permit quick and positive reaction to unusual and or emergency situations.

With respect to production controls, I believe farmers, as a group, would prefer to be totally free of these and permit the marketplace to determine the supply and demand situation. However, this can only be realistically accomplished through the elimination of many artifically erected trade barriers which hinder the free movement of agricultural commodities, especially in the area of interstate commerce.

Certainly the elimination of such practices would be viewed with approval by consumers who consider them to be an unnecessary burden of the taxpayer.

In addition, production controls and price support encourage mediocrity and even downright inefficiency on the part of some producers.

Maryland is, of course, at the present time highly sensitive to the issue of natural resource management, especially as it relates to water quality. I would say that if production controls are to be maintained, we would look with great favor on any which would be targeted at these areas.

Is it realistic to expect continued high export levels over the coming decades? We must be optimistic and believe so. The United States will continue to be the nation with the largest and best balanced supply of production factors. The new wave of technology

*Secretary, Department of Agriculture, State of Maryland.

mentioned in question VIII will even add to our efficiency as producers. This should make it more and more difficult for competing nations. Perhaps, as this occurs, our competition will recognize that an inefficient national agricultural system cannot forever be maintained at an artifically high international level through subsidization and will begin to devote their time and energies to economic activities more suitable to their natural capabilities and comparative advantages.

In line with this, and in response to question VII, I do not believe that we can forever continue to tolerate the preponderance and proliferation export subsidies and nontarriff trade barriers employed by our competitors and trading partners. I am totally in favor of free trade but this cannot exist when one party gives only "lip service" to the free trade concept. I'm not sure how much longer the United States should attempt through logic and persuasion to convince our trading partners to abandon these unfair tactics. Not too much longer though. If reason cannot prevail then sterner action must be taken, perhaps action in kind.

MINNESOTA

TOWARD A NATIONAL FOOD AND FIBER PROGRAM*

The crisis in agriculture today must be addressed as a society-wide problem—where every person has a right to participate in the planning for the future, and the responsibility to contribute to the stewardship and care of these precious resources.

This is true for two reasons. The first is that farming provides one of the three essentials of life, along with air and water, and it has a serious impact on the environmental quality of the water, the air, and our soil.

The second reason is that agriculture and food production is the largest industry of our country, employing over 20 percent of our workforce. With assets over $1 trillion, agriculture is equal to the combined size of all our manufacturing industries. Farming is an important economic activity in every State, and in almost every country around the world.

SOCIETAL GOALS FOR AGRICULTURE AND FOOD PRODUCTION

Before specific policies and programs can be formulated, long-term goals and objectives must be developed, including:

A quality of life in rural areas that is secure, comfortable, and attractive;

A strong rural economy, including small businesses and available nonfarm employment;

Protection of our natural resources for future generations;

Quality food for consumers at reasonable prices;

Stability in the balance of supply and demand;

Reasonable working conditions and hours for farmers; and

Fair prices for farm products to cover the farm families' labor, plus all other costs of production, indexed to reflect ongoing increases and decreases in real costs and to maintain an equality between rural and urban standards of living.

SPECIFIC OBJECTIVES FOR THE 1980'S

Based on these overall goals, the following specific objectives for agricultural food and fiber policies best reflect the interests of family farm agriculture in the United States today.

Increase in the number of farmers and rural residents, especially in areas where average farm size is well above the most efficient size for family farm operations.

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*Department of Agriculture, State of Minnesota.

Increase in the number of young and beginning farmers, and increased opportunities for part-time farmers to farm full time if so desired.

Prevention of the forced liquidation of farm families who want to remain in farming, but who are being forced out by conditions beyond their control.

Decrease in nonfarmer, corporate, and nondomestic ownership of farmland and other food-producing resources.

Increase in the number of small businesses, churches, and other community services in rural America.

Increased availability of basic social services in rural areas, including medical care, educational opportunities, public transportation, including the introduction of new services to meet the total social needs of our farming communities.

Protection and expansion of our farmer-controlled cooperatives.

Increase the percentage of our crops, livestock, and dairy products marketed through collective bargaining and cooperatives within the United States and internationally.

Encouragement of additional cooperative efforts wherever economically feasible, such as the sharing of specialized equipment, job sharing, and other time and money saving efforts.

Diversification of agriculture within the regions of our country, and increased diversification of individual farm operations.

Strong protection of our soil and water resources, including dramatic increases in conservation practices, soil banks, limits urban sprawl, pollution control measures, and other land and water preservation efforts.

Increased use of farm practices which enhance the sustainability of our food-producing land and water resources, including a decreased dependence on expensive energy-intensive methods.

Reverse the decline in value of farmer-owned assets.

Protection and expansion of land ownership and farming by blacks, Hispanics, and Native Americans.

Protection and expansion of land ownership and farming by women, including the end to discriminatory practices in lending, social security, and agricultural extension.

Securing of fair and secure rights for tenant farmers.

Just economic benefits for all workers employed in agriculture, including migrant farmworkers.

Secure, effective measures for caring for families, livestock, and our land and water resources in the case of natural disasters, such as floods and droughts.

Safe, nutritious, and secure supply of food at affordable prices and provisions to insure adequate nutritional needs to all people, regardless of economic class, race, or age.

Research, education, and legislation to promote higher levels of safety in all elements of farm labor, including machinery operation and the use of farm chemicals.

Safe, healthful, and humane conditions for all farm animals.

System of taxation which encourages family-farm-sized operations, the transfer of land between generations, and the prevention of large-scale corporate domination of our food supplies.

Stabilization of farmland prices and rents, linked more closely to the actual agricultural value of the land.

A system of international trade which assures adequate supplies of food, where exchange is on an equitable basis, which respects the food policies and the agricultural development programs of other countries.

A system of international food assistance that assures adequate supplies in case of emergencies anywhere in the world.

Increased understanding and cooperation between rural and urban people.

These general policy objectives should be the overall criteria for designing and evaluating the specific programs addressing day-to-day concerns facing agriculture, such as new technologies, changing demographics, farm credit practices, transportation policies, Extension Service programs, land-grant college and other educational programs, and agricultural research.

At the base of these objectives is the fundamental commitment to a economically viable family farm system. We believe that the basic threat to agriculture today is the economic conditions which are forcing out of business almost 1 percent of our family-farm operations each month.

The takeover of agriculture by corporations, banks and wealthy individuals must be reversed if we are going to accomplish our previously stated objectives. Experience has already shown the enormous problems created by the replacement of family-farm agriculture with "factories in the fields."

Corporate control of food and fiber production, like corporate control of oil and other raw materials, has lead to higher prices for consumers, lower wages for workers, including farmers, and a threat to the overall security and sustainability of these resources.

Corporate domination of agriculture will continue to result in a massive depopulation of rural America, destroying businesses, churches, schools, and other community institutions in the process. Every farmer lost leads to the loss of at least three other jobs.

Corporate displacement of farmers has resulted in mass migrations to our already crowded cities, with unemployed farmers joining the ranks of the urban unemployed.

Corporate domination has lead to the increased exploitation and displacement of labor, both farmers and farmworkers.

The quality and safety or our food supply has been seriously damaged.

Corporate attitudes towards our land, water, air and other natural resources and environmental concerns is well proven. We cannot survive on a planet taken over by these corporations.

Every farm that is taken away from a family and put under the control of a corporation or bank is the loss of politcal/economic power from working farmers, and is a further increase in the power of corporations and banks.

We must address this crisis as soon as possible, or we will not have a viable family-farm system by the end of this decade. We believe that the following program must be implemented immediately to begin to reverse this situation.

TOWARD A 1985 FARM BILL

Our 1985 farm bill must be formulated on the principle of adequate income for producers, based on a fair price received for their labor and all other cost of production.

Over the next 6 months the alliance will be examining various aspects of the upcoming 1985 bill, and will present specific proposals for discussion on various aspects of food and fiber production.

In this issue of AMMO, we are looking specifically at proposals for the storable grains and cotton.

Storage grains and cotton national farm programs

In order for farmers to receive adequate prices in the marketplace for their crops they must receive marketing assistance from the Government to establish a program of effective supply management, established through a nonrecourse loan program with a floor to protect family farmers at 90 percent of parity, and a ceiling to protect consumes at 110 percent of parity.

Supply would be managed to insure adequate production to meet domestic markets, domestic food assistance program needs, exports, international humanitarian food assistance, and to maintain an adequate reserve inventory in case of future shortages and to stabilize prices.

Management of production would be done to insure the protection of small- and medium-sized farms are economically strong operations, to insure maximum water and soil conservation measures, and to contribute to the overall objectives stated above.

WHY SUPPLY MANAGEMENT?

Preserving our soil and water resources for future generations requires serious planning and coordination to insure maximum sustainability and adequate production.

Since food is a life necessity that is highly dependent on uncontrollable factors like the weather, we must take management measures which insure adequate production and emergency inventories in case of disasters.

Under our current marketing system, without serious supply management, any supplies beyond immediate needs is not considered an inventory, but rather it is labeled a "surplus" and used to destory market prices.

Why a nonrecourse loan program?

This is the only program that has been proven successful when used in conjunction with a serious supply management program.

It is a program that currently exists in the law, and there is existing authority for the Secretary of Agriculture to implement this program.

It is designed to create an adequate reserve to be used in case of emergencies, like this year's drought, and to control rising prices through the reserve release program.

It is a farm program that will not require a new bureaucracy, and it is actually made money for the Government during the years it was in effect, in conjunction with a serious supply management program.

It provides for orderly marketing throughout the year.

It allows farmers and agribusinesses to plan more accurately, and it helps secure local credit for production purposes.

By using sliding-scale-interest rates on the loans, and other mechanisms, limited-resource farmers can be assisted in their efforts to gain economic strength, and pressures for continued growth beyond efficient family-farm size can be tempered.

Why a ceiling on loan rates?

To prevent or limit unexpected sudden rising in prices to processors and consumers.

To allow food and fiber processors to plan and carryout their business activities in an orderly business climate, without the fear of unavailable or prohibitively expensive raw materials.

Farm product prices which fluctuate too high, like those that fluctuate too low, create an imbalance in the economy that causes hardships on a number of sectors of our society and economy, and often require massive Government intervention to correct the imbalance.

Why a floor on loan rates?

Unless farmers can earn a minimum income, like a minimum wage, adequate to meet their basic costs of production and living expenses, they will be forced out of farming, with the land passing into the hands of corporations, lenders, and wealthy individuals.

Conservation and pollution control measures, which must be adequately maintained to prevent long-term problems, require an ongoing financial contribution from farmers. Farm income must be maintained at a minimum level to insure the continuity of this important process.

An adequate floor price is necessary to insure that practically all farmers will participate in the supply management and soil/water conservation programs.

The only existing alternative to adequate farm prices is direct welfare payments from the Government, like the current target payment system. Not only has this system lead to bankruptcy among hundreds of thousands of farmers, it is an enormous burden on all of us as taxpayers.

Parity levels are set to cover the cost of production, and to insure an adequate wage to the farm family, roughly equal to the wage of an urban worker doing similar work. If this level falls below a minimum level, it becomes impossible for farmers to pay their bills, thus the entire business community and the workers within the agricultural industry suffer.

The support loan level is the single most important factor in the establishing of the so-called "market price" in the United States, and the U.S. price is the most important factor in setting the world price on the major storable commodities. Unless our nonrecourse loan rates are set at an adequate level, the net effect is to economically damage the economy of other countries around the world.

Unless prices are set at an adequate "floor" it allows corporations to continue to take raw materials without adequate payment for the labor or the cost of production expenses involved.

We fully understand that there are numerous issues to be addressed to both repair the damage already created by the agricultural policies of this country since the early 1950's, and to achieve the sustainable family-farm system that we need to insure a safe, secure, and affordable food supply in the future.

We also are aware of the enormous forces which will believe that these objectives and policies will not be in their interest, and who will try to stop them and to continue the current policies. We will need the support and active participation of broad sectors of our society to be successful.

We welcome all comments, suggestions, criticisms, and most of all the opportunity to discuss these ideas with any other persons and groups committed to maintaining and building the economic and political power of farmers and rural Americans, and who are interested in directing this power towards the securing of peace and social justice for all people.

Why should States pass the minimum price bill?

Congress has failed to price farm commodities at an adequate level. During the past 30 years, Congress has repeatedly cut the real level of price support. As a consequence, the agricultural sector, the largest industry in the farm States, has been driven into a financial depression. The economic crisis in agriculture has dragged down the entire economy of the United States, hitting the farm States especially hard.

Farm States have a vital stake in securing their economic recovery as soon as possible. Recovery cannot occur, however, until the purchasing power of agriculture is restored. Minimum price legislation is the only means by which the task can be achieved without budget exposure to State and Federal Governments.

Working for State action on minimum price legislation does not mean ignoring Washington's role in farm policy. Rather, both levels of government should be the focus of sustained political action to establish and maintain a parity farm program.

OREGON

(By Leonard Kunzman*)

GOVERNMENT

The agriculture industry, and consumers, will benefit from leadership, services, funding and political support provided by a cooperative effort of Federal, State and local governments.

Agriculturists urge further development and expansion of our export markets and a reduction of Government protectionist policies.

The agriculture industry would like to have the assistance of Federal, State, and local government in educating the nonfarm sector about agriculture, its contribution to the economy, and its unique production methods.

PROGRAM OPERATION

Obtaining a balance between Government programs may be difficult due to the variety of differences within the agriculture sector (geography, markets, labor, and so forth). Mandating specific programs relevant to all areas of agriculture will result in serious problems to all concerned. This indicates the need for broadly based farm policy. Congress must develop and/or revise domestic farm policies that protect the farmer and consumer from volatile prices. Growers are suggesting that crop price supports be used as interim financing, giving growers time to sell their crop, rather than a price which the Government pays the farmer to take the crop off his hands.

POLICY

Agriculturalists urge Congress to help "put the profitability back in agriculture." Government attention should focus on: (a) development and expansion of U.S. export markets, (b) availability of farm financing, (c) a close examination of grower-financed (self-help) farm programs, (d) funding of pest control (weeds, insects and disease), (e) research and development of alternate crops, (f) continued development of new resistant crop varieties, and (g) conservation and proper management of natural resources.

COST

(1) USDA programs (Federal marketing orders, PIK) need continued support in spite of political and uninformed public criticism.

*Director, Oregon Department of Agriculture.

The development of domestic policies together with these programs can protect U.S. farmers and consumers from volatile prices.

(2) A closer look needs to be taken at the possibility of grower-financed farm programs. The self-help program idea is an alternative to short-term mechanisms such as the PIK program, and the idea is receiving support from the farming sector.

PRODUCTION CONTROLS

Oregon supports the encouragement of production for the world marketplace; not a surplus. The issue of mandatory versus voluntary control of production needs to be explored further. Oregon's commodity commissions are an excellent example of voluntary or self-help programs aimed at enhancing markets for specific commodities. A need may persist, however, for Government support for commodities grown in large quantities nationwide; either to assist in maintaining a balance of supply and demand or to simply meet pressing world food demands.

Congress should design production control programs that focus on profitability in agriculture. Production for unknown markets would be prevented and the reliance on exports for relief of production surplus problems would be decreased. In addition to profitability, production control programs should include production efficiency and management incentives.

Production control programs appear to be increasingly ineffective. Other exporting nations are not only expanding their production of major crops such as wheat, but are also negotiating for new export markets. Currently the world recession, a strong U.S. dollar, damaged feelings over recent embargoes, and other factors are combining and working against U.S. export sales; a situation that competing nations are taking advantage of.

DOMESTIC POLICY IN A WORLD ECONOMY

This is the second straight year that the value of U.S. exports have decreased and exports indicate no near-term improvement. Competition in the world marketplace is greater now than ever before. Congress must attempt to keep food issues out of the foreign policy arena. A lingering example of the consequences of using food as a weapon is the Soviet grain embargo.

TRADE

Protectionist trade barrier problems are greater then ever. If European export subsidies continue to rise, U.S. products in international marketplaces will continue to be at a disadvantage. The situation is generating discussion about retaliatory measures, and what seems to be developing is a growing clamor for protectionist legislation—fighting fire with fire. In the case of Japan, the desire to protect the interest of manufacturing States could spell problems for agriculture States, particularly in the West, where our trade is agricultural. Congress needs to realize that protectionist measures aimed at sustaining the economics of many manufacturing States could have a severe and negative impact on agricultural export States if foreign nations were to retaliate with protectionist

measures of their own. It is up to Members of Congress representing agriculture interests to drive that point home; reduce trade barriers; don't build new ones.

RESOURCES AND TECHNOLOGY

The new wave of advanced technology will have a tremendous impact on the agriculture industry. Technical innovations such as the computer will positively contribute to agriculture by providing access to an increased knowldege base for decisionmaking. Decisions based on complex information will be made faster as the analysis process will be quicker, more accurate and will include an increase of analysis methods used for each individual situation. Advanced technology can contribute to every segment of the agriculture industry through the improvement of agribusiness management. Computers will provide farmers with the essential ability of effectively utilizing information pertinent to their businesses. They will help farm managers to increase profits and farm efficiency through better recordkeeping and analysis of alternate courses of action. The next generation of farmers will use computers to their fullest. It will also positively impact biogenetics, pest control, communications and the availability of information related to weather, business management and research. Agricultural policies and programs should allow for and reflect these changes.

Proper resources management, including conserving, developing, and protecting the quality of natural resources, should be a major concern to all Americans. Government farm policy should direct efforts toward the development, experimentation, and usage of minimum till practices and supplemental chemical usage. Conservation tillage is to be the most significant technology yet developed for cultivated crop production and the simultaneous control of soil erosion. For example, technical advances/innovations come into play as pest control, primarily control of noxious weeds, becomes increasingly difficult with minimum till practices. New methods/strategies must provide product quality equal to that obtained from popular cultivation techniques.

VIRGINIA

(By S. Mason Carbaugh*)

Comments on Major Issues Relating to U.S. Agricultural Policy Development

GOVERNMENT

The continuing economic development of this country's food and fiber system should receive a high priority from Government, both in terms of financial resources and clear policy and program directions. American agriculture has a proven comparative advantage in relationship to other countries and all efforts should be taken to insure that this advantage is maintained.

Government should provide leadership and financial support for research for development of raw agricultural products into finished products (added-value products). Very little public moneys are now being spent to develop added-value products from our tremendous production of raw agricultural products.

Government should continue to work in ways to develop new markets for agricultural products while expanding or improving on current international markets. On the supply side, emphasis should continue to be placed in areas that are needed to insure that the food and fiber products that are produced and marketed are wholesome and meet any necessary quality standards.

Further, Government should take appropriate steps to enhance the overall stewardship of land and water resources needed in agriculture. There must be a clearly established (explicit) farm policy that would organize and guide the efforts of all participants involved in shaping agricultural policy and programs at the Federal level. The executive branch and Members of Congress should be well briefed and made aware of structural changes taking place in agriculture today, and the fact that more and more nonfarmers are beginning to participate in and effect agricultural policy and agricultural program developments.

POLICY AND PROGRAM OPERATION

Since the beginning of farm legislation in the 1930's, agricultural policy has been oriented basically to improving farm income. In more recent times, this policy has focused on ways to reduce price and income instability, along with continuing efforts to improve farm income.

Federal farm policy during the past 50 years has moved through numerous cycles of Government support and free market ap-

*Commissioner, Department of Agriculture and Consumer Services.

proaches with varying mixes of high price supports, supply controls, voluntary supply controls, target prices, and most recently PIK (payment-in-kind). With all of these programs in place, U.S. agriculture continues today to be faced with more income instability.

The 1985 farm bill should contain an explicit policy statement dealing with the need to improve the income of U.S. farmers. The general philosophy that should go into programs in the 1985 farm bill should basically deal with price-support approaches and supply-management techniques. It is commonly known by economists and others that erratic commodity price changes result primarily from the highly inelastic nature of agricultural supply and the demand for food and fiber products.

While voluntary farm programs may appear on surface to be "the right approach," most voluntary programs in the past have tended to be ineffective because of the lack of financial incentive to attract a significant amount of participation. While certain programs should be adjusted or developed to deal with unknown or emergency situations, major short-run changes in farm programs have tended to add confusion to U.S. farmers in making their long-run plans regarding production and marketing. Perhaps a more explicit and well-defined policy would overcome major short-run changes in farm programs.

Perhaps this is an appropriate time to consider the development of policies and programs that will differentiate policy and program developments between large U.S. commercial farmers and small-scale operators.

COST AND PRODUCTION CONTROLS

Price supports levels should generally be set at levels where farmers would have the opportunity to make adequate returns on investments. With effective supply management programs, the supply of agricultural products could be managed at that point where market price equilibration would occur within the range set by a given price support. However, this approach must carefully take into consideration world agricultural commodity prices. The application of price support without supply management will only lead to excessive surpluses in the long term. A good example of this is the current dairy situation.

DOMESTIC POLICY IN A WORLD ECONOMY AND TRADE

It is realistic to expect higher export levels over the coming decades if world economic situations improve, if stability can be established between the U.S. dollar and foreign currencies, if the United States can convince world customers of its intentions to avoid future use of agricultural embargoes, and if a better understanding can be reached concerning the use of farm subsidies and trade restrictions. U.S. protectionism for many of American-produced products should be carefully evaluated to determine whether our current restrictions should be removed to stimulate freer world trade.

There is no question that agricultural export expansion has been constrained by the unfair trading practices of other countries yet I do not feel that the U.S. Government should subsidize U.S. exports

so that they can be competitive with other countries. A study was made recently and it is estimated that it would cost the United States between $3 and $6 billion if we were to try to subsidize the exporting program.

Exports should be a key component of the 1985 farm bill. Export programs and domestic programs should be tied together because there are interdependent. Export policy and program development should become more of an integral part of total efforts of the United States. Total economic development efforts should be expanded to other free world and Third World economies. U.S. assistance to develop other countries in the long term will mean that more U.S. products will be bought by these countries.

RESOURCES AND TECHNOLOGY

The emergence of new technologies will provide a mechanism whereby more effective management of natural resources can take place. It is unknown at this time as to what effect new technology may have on future farm programs. We have only scratched the surface as far as the development of new agricultural technology as it relates to processing, packaging, and marketing.

WISCONSIN

(By La Verne Ausman*)

Long-Range Planning

I want to commend the Committee on Agriculture, Nutrition, and Forestry for inviting comments relative to long-range planning for agriculture. I therefore submit the following statement.

The first question that must be addressed is, "What should the role of government be?" Basically, government should not do for people what they can do for themselves. Despite all of the rhetoric relative to getting the government out of our lives, reality finds most people asking government to assist from time to time. Agriculture is not an exception, and for some good reasons.

It is reasonable to expect that government will be involved in protecting the environment, protecting the health of the citizens, monitoring trade practices, protecting the rights of workers and many other activities that will impact on agriculture. While these are all legitimate activities, they will have a direct economic impact on agriculture and that should be measured in the interest of consumers.

Government programs that have a direct economic impact on agriculture will have to be reevaluated in light of some emerging situations. Agriculture is increasingly becoming a very highly capitalized business. It is a highly technical and specialized business which limits its flexibility.

At the same time, it is made up of thousands of individual units which lack market clout unless they are part of a marketing organization. The most traditional structure has been the cooperative—either a marketing cooperative or a marketing and processing cooperative. However, cooperatives are really only a business organization structure and lack market clout, especially in the area of managing supply.

Marketing orders can provide this kind of a function. Because they are quasi-governmental, they can provide the tools to carry out this function. Traditionally, they have been used to expand markets and continue to do so. Because producers set the basic policy, it would be in their interests that market expansion be emphasized along with supply management. Marketing orders can be a valuable tool, and the opportunity to utilize this tool should be expanded in the future. This is in the interest of both producers and consumers because it will provide an adequate supply of food at a reasonable price.

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As to the role of Congress and the administration in the development and administration of farm policy, I believe that farm policy should be subject to the same checks and balances as any other legislation. Regardless of what we say, that decision will be made based on the relationship between Congress and the President at that time.

The seriousness of the current situation demands dynamic action such as our current PIK program. The long-range goal for agriculture should be to build some stability into the agricultural programs and thereby the agricultural economy. The more stable, and thereby predictable, any program is, the better the long-range planning will be. Producer managed commodity programs should be the first option. This will mean further enabling legislation in some areas. When this is not possible, the Government should assist in establishing programs that build markets but also manage supply.

Land retirement may well be the lowest cost method of reducing the supply. It usually is cheaper than storing the crop. It also tends to attract the less productive land and, if accompanied by proper program directives, can serve a valuable role in rebuilding fragile land. From the standpoint of protection of our land resource, cross compliance may be another valuable tool. This does sometimes work contrary to program participation which is essential in obtaining other program goals.

Agricultural productivity in the United States is such that we can expect excess supplies into the foreseeable future. Therefore, real profitability for agriculture is very contingent on export markets. Because of the domestic policies of many of our competitors and the great government involvement in their programs, it will be necessary for our Government to be involved in our export progams. To do anything different than that would be to ask our farmers to compete not only with farmers around the world but also with most governments. Despite our productivity, this is not possible in many instances.

Therefore, we should establish an export policy and pursue it vigorously. This should be in all negotiations or trade agreements. We should remove agricultural exports as a tool in foreign policy. We must continue to build on our current efforts in export financing and trading companies. Long-range trade agreements may be valuable in building stability in our world markets.

The centrally controlled countries of the world certainly come forward with a unified policy on trade. Even the European Economic Community with its many countries has a consistent policy on trade that is pursued in a systematic manner and with identifiable long-range goals. I would not suggest that we adopt their domestic agricultural policy. That is not politically possible here in the United States. However, we must receive our share of the world market, or the United States will have drastically curtail its agricultural production or increase expenditures for farm income support.

Some commodities have little opportunity in world marketing. Dairying would be an example. New Zealand sets the basic price which is below our cost of production. Europe subsidizes the sale of its surplus. This cuts us out of any real opportunities unless it is a subsidized sale which is politically not possible. Therefore, we must

provide the tools so that we can match domestic production to domestic needs.

If I were to summarize the thrust of agricultural policy for the rest of this decade, I would say that the heavy capitalization of agriculture, which is likely to continue, forces us to develop programs which reduce risk and market fluctuation. These programs should be managed by the affected parties to the degree that they can with limited Government involvement. Government should direct most of its activities to building foreign markets in whatever way possible.

PERSPECTIVES FROM LENDERS AND PRIVATE INDUSTRY

FINANCING AND FARM POLICY*

(By George D. Irwin**)

Farm policy changes, and the forces that influence them, are especially important to the cooperative Farm Credit System and to the Farm Credit Administration, its supervisory agency in the U.S. Government. The Federal land banks and production credit associations provide nearly one-third of the borrowed funds used by American farmers and ranchers. The banks for cooperatives provide some five-eights of the total credit used by U.S. farmer cooperatives.

As the Federal supervisory agency over the Nation's largest agricultural lenders, FCA is enormously interested in the viability of the farming sector and in the evolution from which will emerge the clientele of the future. These developments are influenced by the kinds of Government programs that will exist to supplement commerical lending, provide stability to various commodity sectors, and otherwise define the lending environment.

The Federal Farm Credit Board, the presidentially appointed policymaking body of the Farm Credit Administration, makes it FCA's policy that we address only those issues directly related to agricultural credit or to the ability of the Farm Credit System to deliver sound, adequate, and constructive credit to American farmers, ranchers, fishermen, and their cooperatives. The comments in this paper are thus not intended to be an exhaustive treatment of policy issues.

The first section discusses the general environment affecting both credit and farm policy. The second section considers the role of credit in adjustment and the relationship between commercial and Government credit programs. The final section addresses the functions of the Farm Credit System, and especially its need for assured access to financial markets.

THE ECONOMIC ENVIRONMENT AND POLICY ISSUES

The economic environment during the past 10 years contained three forces that overrode all else in affecting the configuration of the farming sector. These forces were opening of the world agricul-

*This discussion draws heavily from an FCA analysis titled "Financing and the Structure of U.S. Agriculture," which was prepared for the USDA hearings on the Structure of Agriculture, April 1980.

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tural and financial markets, energy—both supplies and prices, and general inflation.

Each had enormous impact on location and cost of production, on the distribution of rewards (income and gains in net worth) from farming activity, and on access to capital and other resource markets. Changes in the economic geography of U.S. agriculture became inevitable, and will continue regardless of the farm policy actions that may be taken in 1985. Policy actions must recognize this dynamic environment in setting both objectives and procedures.

It will not be a stable period in which to measure the effect of current or future policies. Measurement was particularly difficult in the early 1980's, as worldwide recession and disinflation unwound many of the assumptions on which decisions and policies were made and rendered the adjustment process more difficult. It became apparent that the balance between overabundance and shortage had not shifted nearly so far as was assumed in designing the 1981 farm bill. The farm bill written in 1985 will thus require some changes.

Differences in ideology will also impede resolution of the Government role. Three traditional ideologies come into conflict with each other in the area of farm policy: family farm, rights of entrepreneurship, and equality of opportunity. Americans value all of these and will have to face some difficult tradeoffs. The right of entrepreneurship is strongly felt. It leads toward concentration of farms in the hands of the most able, resistance to public efforts to control expansion or resource exploitations, and an efficient producing sector. On the other hand, the family farm and equality of opportunities ideologies may lead to emphasis on public policies encouraging larger numbers of farm units, each of a somewhat smaller size. Little difference in economic efficiency or consumer food costs may be involved. In turn, policy emphasis on the family farm, handed down through generations, forecloses equal opportunity to those not farm-born. Whether and how Government policies resolve these conflicts will involve much intensity of feeling and will influence the kind of response to policy that evolves.

A number of other economic and social issues affecting this future agriculture also have a direct bearing on credit programs. They deal primarily with areas in which the individual farmer is interdependent with the rest of the agribusiness and the other economic sectors. Seven warrant further comment.

(1) How can farmer interests be reflected adequately at various stages in dealing with agribusiness and other economic sectors?

The desire for an individual, competitive, family farm structure contrasts markedly with a less pronounced effort to maintain small size and greater competition in other economic sectors. The overriding concern in farming structure must be for maintained viability in relation to the agribusiness sectors. This, in turn, places some limits on family farm policy. Farmer cooperatives provide a form of countervailing power that enables competitive, moderate-sized family farm production units to continue. The banks for cooperatives are important facilitators, and farm policies have some impact on the cooperative environment.

(2) How will farm policy goals change to deal with the increasing nonfarm involvement by farm people?

Many farmers perform and apparently prefer a very wide range of activities, both on and off the farm. Some are employed off the farm or have family members so employed, while many others have nonfarm businesses or investments. The welfare of the farm sector is now somewhat independent from the welfare of people involved in farming. But the degree of dependence varies widely between farming regions.

Farm programs cannot focus solely on a unique set of people called farmers, and farmer welfare doesn't depend exclusively on policies affecting them as farmers. With fewer unique, full-time farmers, and many with either outside property income or labor income, it is extremely difficult for Government programs to achieve any particular goal. The problem is compounded by the great dispersion in income from farming between farm-size groups. In the Farm Credit System, we face special problems in defining appropriate scope of service to deal with the great diversity of people who are involved in agricultural production.

(3) What is the appropriate Government role in shifting risks from the farming sector?

The relationship between risk and farm size expansion seems to be a crucial one. Lending in a volatile price and income environment must necessarily be more conservative than in a stable environment, other things being equal. This suggests that the amount of risk the public assumes through Government programs can be an important consideration in the use of financial leverage by entrepreneurs as they expand the size of individual farm operations. On the other hand, large size combined with a strong financial position constitutes the strongest sort of risk-bearing ability. Thus, Government risk bearing does not appear to have an effect that is unique for different sizes of operations.

The level of risk may be influenced more by political actions outside the farm sector than those inside it. Hence, there is a strong argument in favor of some public risk containment policies. Growing world agricultural markets, with the great potential expansion in middle income developing countries, also suggests a continuing role for Government in providing insurance and guarantees for trade with developing countries.

Managers need to know in advance the limits of risk protection to be afforded by the public. They ought to be accountable for success or failure based on their skills in decisionmaking, given a "steady hand" of the public sector in the event of natural disasters or major political decisions having abrupt, disrupting impacts.

(4) How can Government risk protection be delivered without curtailing incentive for good management and production efficiency?

The economic environment of the past decade provided periods of spectacular returns to farming and periods of disastrous earnings. The spectacular periods attract some entrants who have based their management planning and leveraged their financing on the assumption that such periods were permanent. The kind of management error implied in such thinking should not be the beneficiary of Government programs any more than should management

errors in the area of production practices. An efficient farm production sector is necessary as part of a productive, low-inflation economy. Government programs must be carefully designed not to correct individual errors, but only to deal with predefined major external forces causing impacts that should properly be shared by the general public.

(5) What are the viable alternatives for defining the family farm? Is separation of land ownership from farm operation inevitable?

The acceptable definition of the family farm, as well as the current farming structure, varies considerably from one part of the country to another. Preferred or accepted size is equally diverse. In some areas, the concept involves only a rental unit, but in others it is an ownership and operator unit. Policy focusing on one of these directions is unlikely to succeed on the other.

This problem has been increasingly significant, because, during the 1970's, so much of the earnings on agricultural resources came from capital gains rather than current income. The obvious cash flow deficiency in trying to service debt is a major barrier to new farm entry as an owner. Thus, the balance between capital gains and current income sources is an important determinant of who is able to purchase agricultural land.

If it is found not feasible to shift this balance by altering Government policies or programs, and if continuing emphasis on a moderate-sized family farm structure is to be taken as a goal, then the separation of ownership from use becomes an implicit reality for public policy. If the balance can be shifted, then a broader set of policy alternatives would be available. As basic steps, the priorities should be to give Government payment benefits the weakest link to land values and to concentrate on maintaining a low general inflation rate. It appears that general economic policy, as it impacts on inflation, has the greatest influence on capital gains earnings in agricultural land.

(6) Who should have the opportunity to enter farming?

The unexploited economics of size, the small number of retirements each year, and the lack of diseconomies to size all suggest there will be relatively few farms available. At least during favorable income periods, there will be strong competition for them, between new entrants and those wishing to absorb these farms into existing operations. Some of the latter are expanding to bring new family members into a business.

Estate tax revisions are usually oriented toward the idea that succession should come from within existing farm families. On the other hand, policy debates and indeed some farm programs also deal with new entrants who are without significant family support. The balance between these kinds of programs becomes critical if public policy includes programs designed to provide subsidized entry opportunities.

Farming has become much more complex, both technically and mangerially. Should higher levels of skills and background be necessary to qualify as an entrant? If so, is it to be assumed that those with such skills will come only from a farm background? Credit programs must address these issues.

The question of minimum viable size is also critical to any Government credit program designed to provide entry opportunities

into farming. It is no service to provide entry opportunities into operations too small to have any chance of success, just as it is no service to continue subsized programs to borrowers without hope of graduating to a commercial lender. At the other extreme, programs must avoid the assumption that larger size is always more efficient.

(7) How can farm commodity programs be adjusted to perform effectively across the wide range of farm sizes?

The large commercial family farms produce the bulk of farm output, but make up a smaller proportion of farm numbers. In contrast, a vast group are part-time farmers, but they may react much differently to farm programs. A middle-sized group has a third set of problems. Discussions in setting a new farm policy need to include all these groups and to address policy objectives with respect to each.

THE ROLE OF CREDIT IN FARM POLICY

Credit is important in facilitating the accomplishment of changes that are caused by more basic economic, social, and political forces. However, we do not view credit as a primary cause of adjustments.

Economic activity is determined by a variety of forces. Financing determines who can or cannot get involved in an economic activity, by agreeing or not agreeing to become the debt "partner" in a proposed transaction. The basic role of the financial organization is to tell a farmer how much debt resource will be available. But it is the farmer who must make the economic decision of how much of his equity resources to commit. He may pay too much, but the opportunity to be an entrepreneur must include the right to fail.

The first interest of the financial organization must be the safety of the loan; it must avoid superimposing its judgment on a prospective borrower, when a borrower mistake would not place the loan amount in jeopardy. A lender may, and does, advise and consult, but the prospective borrower must be free to go counter to such advice. Of course, where the loan itself would be in jeopardy, then lender decision controls. Thus, in this sense, sound credit is not necessarily present only in sound, economic business decisions. This is a basic principle of the separation of commerce and entrepreneurship from finance.

Credit thus affects the rate of adjustment in farming, but is not the primary cause of such change. A whole range of economic and social forces in the private sector have impact. In addition, Government programs, in many areas provide such forces, either directly or indirectly, by influencing the pattern of forces in the private sector. Further, only a part of these Government influences comes from areas under the direct jurisdiction of USDA.

At any time, credit programs must serve what is there—both the existing farmers and the basic forces that are in place. The effective way for Government to influence the course of the sector is by modifying these basic forces and not by compromising the functioning of the credit delivery system. That simply dams up a pressure, and the inevitable leakage can have surprising and unintended consequences.

Government and commercial lenders, including the Farm Credit System, have parallel roles in "soft credit" and in "sound credit."

Together, they provide the financing that facilitates farming production and adjustments. There are important linkages between these programs, for the ultimate goal of Government credit programs must be limited to temporary assistance for any individual borrower. Such programs provide legitimate, subsidized entry opportunities for individuals who present too great a risk to commercial lenders, when such entry is considered socially desirable. Or they bridge a temporary period of excessive risk faced by established producers, due to uncontrollable natural or economic disaster. The goal of these programs must be the creation or restoration of viable economic units that will be graduated to commercial lenders within a strictly limited period.

FmHA programs need to be kept viable for their important primary purpose. Otherwise, they lose credibility and may ultimately be eliminated to the detriment of agriculture. Minimum entry standards are needed. If there are to be subsidies to individual entering farmers, there must also be program procedures to gradually switch the incentive to graduation. Perhaps there should be some limit to the number of times an emergency program can be used by an individual, in addition to the more stringent review for graduation. Interest rate incentives and credit-elsewhere tests are other factors to be considered. Guarantee programs need to ensure that they do not provide counterproductive incentives to commercial lenders.

Government also provides credit and substitutes for credit through operation of its commodity price-support operations. Some of this is designed with a credit objective, as in financing storage facilities or guaranteeing exports of commodities. Another portion is provided strictly as a byproduct of the operation of commodity programs. Nonrecourse loan credit and farm program payments often substitute directly for borrowing from commercial lenders. There may be opportunities to redesign programs to shift some of this financing to the commercial sector, and to adjust Government lending terms to make the commercial lending sector more competitive.

Federal credit policies in general are moving toward strict limitation on the total amount of Government loans and guarantees. This makes it even more essential that USDA lending programs focus specifically on the highest priority uses of the limited funding authorities. We believe FmHA priorities should be to beginning farmers and the lower income portion of the farm population. The Federal assistance to larger and more established portions is better served by insurance and other noncredit programs.

Healthy commercial banks, alongside healthy PCAs, FLBA, and BCs, are essential components of the primary credit delivery system for American agriculture. Well-conceived supplemental Government credit programs and credit-related programs can function most effectively and at modest levels when both the agricultural economy and the commercial lending sources are robust. We encourage continued policy support to maintain all these alternative private sources of credit for farm borrowers.

THE ROLE OF THE FARM CREDIT SYSTEM

The roles of the Farm Credit Administration and the private cooperative Farm Credit System, as defined by the Congress and implemented by the Federal Farm Credit Board, need to be clearly understood as part of the evaluation of USDA's role in direct Government credit programs.

The basic authority provided in the Farm Credit Act of 1971 is to supply credit and services to all farmers, ranchers, and fishermen who wish to borrow from the System and can demonstrate their creditworthiness.

The Federal Farm Credit Board has implemented regulations requiring that credit be made available to the full range of farmer borrowers—large and small, part time and full time—and to their cooperatives. Scope of service standards provide that maximum consideration for credit be given to the full-time, bona fide farmer for all his needs. More conservative scope-of-credit consideration is given to the less than full-time farmers. At the other extreme, those only minimally involved in farming are limited to the agricultural portion of their credit needs. Democratic control of Farm Credit institutions at the local level grants them flexibility to adapt their programs to local conditions.

The Federal Farm Credit Board also requires that the System institutions be kept independent of obligations to tailor credit decisions upon any basis other then the applicant's creditworthiness. The Board believes that to do otherwise would prevent the System from fulfilling its responsibility to furnish sound, adequate, and constructive credit to all types of agricultural producers. The Board further believes that this approach to credit will result in the most productive and prosperous agriculture, and thereby reflect benefit to consumers and the Nation.

Accordingly, the Federal Farm Credit Board intends that the Farm Credit System not be viewed as a potential vehicle that might be used to influence the general adjustments in agriculture. Rather, it should be perceived as an important component of the Nation's credit delivery system, capable of furnishing to the creditworthy farmers, ranchers, and fishermen of the Nation the credit they may need to achieve whatever adjustments may be dictated by the more basic economic forces.

Nor does the Board or the System take specific positions on matters of broad agricultural policy. The focus in on credit issues and on those aspects of agricultural policy that have an impact on credit delivery. Those individuals who are borrowers and stockholders of the System do have vital personal interests in agricultural policy development. They vary from one extreme to the other in their preferences. They are encouraged individually, or through their farm organizations, to make their positions known. This becomes part of the grassroots opinion used to develop Government policies for the future. FCA and the Farm Credit System are dedicated to the singular task of providing continuing access to financial markets for whatever will constitute sound credit, given the policy decisions that emerge.

FARM CREDIT SYSTEM ACCESS TO FINANCIAL MARKETS

Intelligent use of debt capital is critical if agriculture is to be a major contributor of goals that we seek in our national economic policies—productivity, ample food that is reasonably priced, balanced exports, and meeting humanitarian world food objectives. One keystone for a healthy agriculture is a healthy Farm Credit System. The congressional mandate of the System requires that it make credit available to the full range of creditworthy agricultural producers, in all areas of the country, during all phases of the economic cycle. This requirement ensures that farmers, who are more geographically scattered and operate on a smaller scale in a more cyclic industry than many other producers, have equal access to financing, and do not suffer disproportionately during a recession.

This ability to serve all who need credit for a constructive purpose and who can pay a market interest rate depends critically on access to the Nation's financial markets. Reliable lending cannot be divorced from reliable funding. The System must be able to sell whatever amount of securities is required to meet borrower requirements, in both good times and bad. This is the mandate given the Farm Credit System by Congress.

The Congress has provided a number of unique characteristics that help ensure that financial markets will remain receptive to the amount of FCS securities that need to be sold. Taken together, such characteristics are commonly referred to as "agency status." These, along with the strength the System has built for itself—the sound capitalization, impeccable repayment record, recognized skill in agricultural lending, and broad diversification of loan risks within agriculture—enable the System to sell large volumes of securities at favorable interest rates, even in times of adverse economic conditions.

Some recent proposals have called for the elimination of these agency attributes, on the grounds that they provide farmers "too good" an access to financial markets. These proposals would limit such access on the grounds that it permits a Federal intrusion in private capital markets.

It is ironic that a program designed by the Congress to correct inadequate access to funds would now face such a proposal. Has Farm Credit been too successful? We think not. It is evident the entire U.S. economy and its financial system have vastly changed since the 1916–33 period when the Farm Credit System evolved. But we still have the basic disparity between relatively small farm businesses and relatively large businesses in other sectors of the economy that have similar, high-capital intensity. We still have differences in accessibility of financial centers. Without a Farm Credit System, however, farmers would not have equal access. And without the attributes necessary to tap the financial markets, the System could not serve its mission.

The most important concern about losing agency status would be that the System could not sell the volume of securities required to finance farmer needs. There is no precedent in the financial markets for an organization to carry out such a large mission without this status. The unique public-private relationship combining

agency attributes and sound system management needs to be maintained.

Another area of concern would be proposals that pick away at agency attributes, one at a time. The ability to sell large quantities of securities is based partly on agency status, which derives from a whole bundle of attributes. No one can be absolutely sure what the removal of any one of them would do to the market perception that supports the System funding. We all know that financial markets move on expectations, and removal of any one attribute could trigger a change in expectations. It's like removing wall studs, one at a time, from under a roof. One can seldom be sure which stud is critical, or if they all are, until it's too late. For the long-term safety, the design engineer would claim that they all are critical. The possible consequence—loss of quantity access to financial markets—would be a grave catastrophe for the farm sector. It is an area to be approached only with extreme caution, and then only after very careful study.

This is clearly a situation where an objective of some in the area of Government financial policy—removal of agency status—runs into direct conflict with another—the policy mission of the Farm Credit System support to family-farm agriculture. We believe that the agricultural objective should continue to prevail. The Office of Management and Budget made the point well in the 1983 budget document, when it noted that certain activities that are directly Federal, such as Federal deposit insurance, should not be subjected to budget limitations, because to do so would destroy the basic purpose of the program.

The case is even more compelling for the Farm Credit System which is privately owned and does not use Federal funds. A recent GAO report recognized the System as "predominantly private." Just as it makes little sense to place limitations on a Federal program that would destroy its mission, it also makes little sense to remove existing agency status attributes granted by Federal law if it would deny the Farm Credit System the ability to accomplish its mission, as Congress intended. To do so would create a major disruption in operation of Government commodity programs, and as major pressures for expansion of direct Government lending programs.

FARM POLICY AND GENERAL ECONOMIC POLICY

(By Marvin Duncan*)

Consideration of farm policy options is particularly timely. Along with many other economists, I believe that the farm policy in place is no longer working very well. Moreover, I sense existing policy and the policy process are both at something of a crossroads. It is unlikely, I think, that either will long survive without substantial reorientation.

Farmers and others close to production agriculture have—for the most part—viewed the agricultural sector as separate from the rest of the economy and unique in its needs. This view, over time, has engendered a mythology regarding the relative importance of the farming sector of the economy. Thus, most farmers argue that the way to resolve U.S. economic problems is by resolving the problems of agriculture. By this, they usually mean increased public subsidization of agriculture and protection from market forces. Indeed, this attention of Government is usually sought solely for crop producers, often to the detriment of livestock producers, even though livestock sales account for about half of the sector's annual cash receipts.

The farm sector, however, has undergone a change relative to the rest of the U.S. economy. Farmers purchase production inputs and have become consumers, like everyone else. The structure of agriculture has changed greatly. Most of the Nation's farmers operate comparatively small farms and earn much of their family income from off-farm sources. For these farmers, farm program benefits do not add substantially to family income. About three-quarters of a million farmers produce the bulk of farm output and receive very little of their family income from off-farm sources. These farmers receive most of the farm program benefits. For both groups, the business aspects of their farm operations have become less than unique, and resemble other businesses.

U.S. farmers have also changed the scope and method of marketing farm products. Farmers produce for a world market. They have become integrated into a complex and very efficient product marketing system. Thus, it seems reasonable to conclude that the farm sector prospers when the U.S. economy and the economies of trading partners are performing well. To improve agriculture's circumstances, it is necessary to improve the level of general economic performance and consumer demand for food and fiber products. Consequently, agricultural interests are affected by a far broader range of policy decisions than simply those directed at agriculture

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itself. Indeed, as important as farm policy is to farmers, general economic policy may be more important.

The experience of recent years has sensitized the farm sector to the importance of macroeconomic policy and its impact on input costs and product markets. Escalating inflation helped to drive farm asset values and make farm income more dependent on unrealized capital gains on farm assets. Unanticipated inflation held the real cost of carrying debt unusually low. Conversely, during a transition period, macroeconomic policy designed to bring down the rate of inflation—to restore price stability—has resulted in slow or negative economic growth, and overvalued dollar in international exchange markets, and interest rates that are high by historical comparisons. As the U.S. economy has begun to move into recovery, the current imbalance between monetary and fiscal policies and the implications of this imbalance for future inflation and economic performance are likely holding real interest rates higher than they would be otherwise.

Monetary and fiscal policy do not work in isolation. They are interactive in their impact on the performance of the economy. Moreover, in the absence of appropriate balance between policies, more of the burden may fall on one policy, such as monetary policy. In that case, more pronounced adjustment in the policy may be required to accomplish a particular goal such as price stability.

There are also limitations in macroeconomic policy. Monetary policy affects general economic performance, which in turn affects agriculture. Monetary policy is not suited to meeting the needs of a given industry or sector in the economy. Fiscal policy, on the other hand, can be targeted toward a particular sector, as in farm subsidies, but it suffers from being cumbersome to implement.

In an increasingly interlinked and interdependent world economy, there are potential advantages in agreement on macroeconomic policy objectives across major industrial countries and broad coordination of policy. Reaching consensus and acting on consensus in a coordinated manner present huge problems, however. Hence, the likelihood of achieving meaningful results in the near future appears small.

As an explanation for the slowdown in growth of demand for U.S. farm exports, increased output from other countries, such as the EC, is often mentioned. At the same time, U.S. officials point to EC export subsidies and note EC incursion into traditonal U.S. markets. (Nevertheless, it seems unlikely that the EC will soon change its agricultural policy.) In all likelihood, however, the slowing of world economic growth and the consequent international credit problems are the main causes of weakness in demand for U.S. agricultural exports. On a long-term basis, the heightening of tensions between the United States and centrally planned countries, especially Russia, may also be an important factor. If they are to be successful, U.S. efforts to restore export demand growth must identify the problems objectively and accurately before setting out to correct them.

Farmers have a keen interest in the direction of farm policy. It seems to me, however, that the farm sector is at something of a crossroads. Many farmers remain committed to a farm policy that is strongly market oriented and relies heavily on sales to export

markets for price strength. Increasingly, however, another perspective is suggested. That perspective calls for higher Government price guarantees and production controls to achieve acceptable price levels.

While it is not yet clear which direction policy might take, it seems logical to argue that price guarantees that are insensitive to world market prices would adversely affect U.S. farmers two ways. First, farmers would capitalize the value of price guarantees into the value of their fixed assets, especially land, and, as a result, raise their production costs above those of foreign competitors. Second, public subsidies would be required to export U.S. crops that are priced above world markets and to obtain producer compliance with production controls. As a result, control of export market growth would pass from the agricultural sector to budget watchers in whatever administration was in office. It seems unlikely that the agricultural sector would favor that outcome.

Moreover, it is not clear that in a period of extreme budget pressures, the Federal Government will continue to allocate as much or more money to the agricultural sector as in the past 2 years. Thus, those persons who are convinced of the appropriateness of continued high levels of subsidy may find that future budget priorties preclude such action.

Most of those calling for high levels of Government subsidy in agriculture do so, not because they believe agriculture is in a transitory period of downward price pressure, but because they fear agriculture has a long-term capacity to produce at price depressing levels. If that be correct—and I think it might be—farm asset values, in the absence of such subsidies or successful programs to increase market demand, could continue to adjust downward and even larger numbers of marginally capitalized farmers could be forced from business.

World market price signals to U.S. producers could work to adjust production levels to market demand. But not all farmers would welcome such marketplace discipline. Another benefit, in terms of competitiveness; would be to help prevent U.S. production costs from outstripping those of competitors in other countries. Any serious efforts to rely fully on market price signals would imply some adjustment problems for inefficient and thinly capitalized U.S. producers. Additionally, to be successful such a policy would likely require substantial Government emphasis on export market development, including financing exports and assurance of contract sanctity in export sales.

To the frustration of many farmers, the range of public and private interests involved in what these interests prefer to call food and fiber policy, rather than farm policy, has increased greatly in recent years. Congressional support for farm policy has also become diffused. From the farmers' perspective, this is both bad news and good news. The bad news is that the issue will continue to be food and fiber policy, not farm policy, and the range of interests involved in making that policy will continue to be broad and diverse. The good news is that farmers, if they so choose to do so, will probably be able to build new and successful coalitions among these diverse interests to affect the policy that emerges.

ARE GOVERNMENT FARM PROGRAMS THE SOLUTION OR THE PROBLEM?

(By Joseph D. Coffey*)

The U.S. Department of Agriculture paid $50 billion to farmers during the 50 years 1930–80. Yet, real (adjusted for inflation) net farm income in 1982 is about the same as it was during the 1930's, admittedly today's farm income is spread among fewer units, but even on a per farm basis, 1982 real net farm income is the lowest in two decades. The current —8.1 percent rate of return to farm capital (U.S. Dept. of Agr., Agricultural Outlook, October 1982) may even be lower than during the depression. It's not an exaggeration to say we are in the midst of a farm depression.

Government intervention in the marketplace is at an alltime high. Price supports apply to one-half of the crop output and to one-fourth of livestock output. Government stocks of wheat and corn in 1983 are near record levels. Direct Government payments to farmers is near $4.5 billion and total farm program costs near $11 billion are estimated for 1982.

Government intervention in agriculture is not limited to the commodity markets. Government is heavily involved in the input markets. The Farmers Home Administration holds $9 billion of the $77 billion of farm real estate loans—more than that held by all commercial banks. The Farmers Home Administration and the Commodity Credit Corporation hold $27 billion of the $85 billion of the farm non-real-estate debt—more than that held by the Farm Credit System (U.S. Dept. Agr. 1981). In fact, USDA loans to farmers are at record levels.

In addition to credit, Government is a major supplier of electricity, irrigation water, flood and erosion control, crop insurance, education, research, and information to farmers. Also, the Federal Government owns 1 percent of the cropland and 33 percent of the pasture and range land. The irony of such pervasive Government participation in the last bastion of the economist's dream of free competition during a conservative Republican administration is striking indeed.

Government in agriculture is not unique to the United States nor to this century. Governments have always considered food too serious a business to be left to farmers. The historian Hugh Thomas notes that the very beginnings of government sprang from concerns about agriculture. The first Emperor of China in 1200 B.C. came to office on a platform of resolving the agricultural problems of his day. Since the early middle ages, European civic authorities have regulated food.

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Just as government programs are ancient, so are the responses of farmers and consumers to them. In 232 B.C., the Roman Consul Flaminus placed grain production under tight controls, reduced prices to farmers, and subsidized bread to consumers. Farmers shifted from grain to olive production and Rome had to import grain to placate the consumers.

Prior to 1933, the prevailing philosophy was that the market could do a better job of allocating agricultural resources than the Government. Then came the colossal crash. Farm commodity programs were initiated to rescue farmers from the Great Depression. Fifty years later, the Government is still using programs initiated during the depression to assist farmers' escape from a severe recession. The more things change the more they remain the same.

The diagnosis of agriculture's ills during the 1930's was that of low income attributed to overproduction. The prescription was to limit production in order to raise prices higher than they otherwise would be. According to Paarlberg, farm supplies per person were no greater during the depression than before.[1] He reasons that the cause of the farm problem was more likely the collapse of money and credit rather than overproduction.

Could it be that for 50 years we have made the wrong diagnosis of agriculture's ills and prescribed the wrong medicine? Certainly, the record of continuing and costly Government intervention in agriculture with real net farm income decreasing suggests that Government may be the problem since it has not been the solution. It is particularly important for those of us in the economics profession, who are especially trained to wrestle with these issues, to take a hard look at Government programs. I recognize we will be damned if we do. We should be damned if we don't.

The assessments of the farm problem by agricultural economists, unlike the farm policies themselves, have changed, perhaps too quickly. Accordingly, I will first trace the past 50 years' evolution of agricultural economists' assessment of the farm problem. Second, I will highlight nine lessons that point to a reexamination of present farm policies.

THE CHANGING DIAGNOSIS

Chronic excess capacity

Irrespective of the true causes or the proper definition, agricultural economists for 40 years contended that the basic farm problem was low income attributed to chronic overproduction. This overproduction thesis was most notably propounded by Professor Cochrane of the University of Minnesota, who in the early 1960's led an attempt by USDA to put tight production controls on wheat and feed grains.[2] Although there were prominent agricultural economists who sharply disagreed with the use of production controls—most notably Schultz and Johnson of the University of Chicago—the farm problem was largely predicated on the chronic overproduction thesis—until the 1970's.

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[1] See Paarlberg, pp. 21-22.

[2] Cochrane's views of the chronic excess capacity date back at least 35 years. For a more recent statement, see Cochrane and Ryan.

The food scarcity syndrome

Beginning in the late 1960's, the pace of U.S. agricultural exports began to accelerate. The climax was the great Soviet grain deal or grain steal, depending upon your point of view. The export boom challenged the validity of chronic overproduction thesis.[3] Earl Butz, then Secretary of Agriculture and an agricultural economist, advocated "planting fence row to fence row." The scarcity syndrome, accompanied by rising prices, prompted housewives to picket supermarkets and triggered a number of unprecedented Government interventions in agriculture during peacetime. President Nixon imposed price ceilings on agricultural commodities and placed export embargoes on shipments of soybeans to Japan and wheat to the Soviet Union. The controversial Secretary Butz advocated "Food Power" as a weapon to counter OPEC's "Crude Power".

The Economic Report of the President for 1975 argued that excess production capacity was no longer a relevant issue. The report argued that the excess labor in U.S. agriculture had disappeared and that the alleged excess crop land withheld by Government programs during the 1960's was largely illusionary because it hadn't yet returned to production. In the meantime, the devaluation and floating of the U.S. dollar stimulated U.S. exports and prompted Ed Schuh to contend that the overvaluation of the dollar had contributed to the surpluses of the 1960's. The implication was that low farm income was due to international monetary policies rather than a penchant for farmers to chronically overproduce. Again in the 1980's an overvalued dollar may be the culprit.

Declining productivity

Concern about the productive potential of U.S. agriculture surfaced in the 1970's. The 1975 National Academy of Science report on Agricultural Production Efficiency spoke in ominous tones about the "clouds on the horizon" caused by slowing productivity growth in agriculture. Climatologists warned that the 1960's weather was unusually favorable and that we should not continue to assume that we would be blessed with such favorable weather. Agronomists, in assessing the corn blight episode of 1970, warned that the narrow genetic base made the United States vulnerable to other similar crop disasters.

Meeting for export demand and gasohol needs

The mounting pessimism on the supply side was magnified by the optimism on the demand side. Agricultural exports continued to boom, a Presidential commission stressed the need for expanded U.S. food assistance to needy nations, and visions abounded of food exports to feed a billion Chinese.

The potential of converting corn to gasohol made the demand outlook even more bullish. With the endorsement and inducement of Government subsidies and to the bemusement of the bootleggers, legalized stills were constructed. Eventually some began to pick at the gasohol bubble. Engineers at Iowa State calculated that it took 350,000 Btu's of energy to produce a bushel of corn which in turn

[3] For an expanded critique of the views in this and succeeding sections, see Coffey and Capps.

yielded only 220,000 Btu's of energy in the ethanol that it produced.[4] Agricultural economists at Kansas State calculated that subsidies in excess of $10 per net bushel of corn marketed through gasohol would be required to make gasohol production profitable (Schrueben and Landkamer).

By the late 1970's, economists contended that excess capacity and low returns were no longer the major problems of U.S. agriculture. It was argued that exports had expanded the market for U.S. farm products, and that higher energy costs and inflation were restraining production to the extent that increasing agricultural productivity was the top priority.

Then the other shoe was dropped. On January 4, 1980, President Carter placed a partial embargo on grain shipments to the Soviet Union to punish them for invading Afghanistan. Market prices plummeted, signaling the end of the 1970's agricultural export boom. In 1981–82, the value of U.S. agricultural exports declined by 8 percent, the first year-to-year decline since 1969. Despite President Reagan's recent offer to sell the Soviets up to 23 million tons of corn and wheat, the Soviets are expected to buy only 10.5 million tons from the United States. In fact, the Soviets are expected to buy more grain from Argentina than from the United States.

Erosion, energy and urbanization

The end of the export boom coincided with other issues. Despite the mid-1970 view that the reserve of cropland was illusionary, the 50 million acre expansion of harvested cropland between 1970 and 1981 raised concerns about soil erosion and calls to preserve farm land. The report of the Agricultural Lands Commission, although privately questioned by the agricultural economists who served on its staff, issued dire warnings of the pending crisis of the loss of farm land by erosion and urbanization. Thus in the early 1980's, a thesis emerged that the slowdown of grain exports was a blessing in disguise because expanding grain exports had caused increased erosion, used large amounts of expensive energy, and exposed the U.S. economy to the vagaries of the international market. Suggestions were even made that farm exports be taxed in order to discourage them and to compensate for their adverse consequences.

LESSONS OF HISTORY

Those who do not learn from history are condemned to repeat its errors. Government intervention, including price supports, acreage reductions, export subsidies, and import restraints, have been tried off and on for 50 years. Is there any reason to believe that they will now succeed where they have failed before? Although I do not advocate a precipitous withdrawal of price supports and production controls, greater reliance on the market mechanism and less on Government might be in the best longrun interests of farmers, consumers, and taxpayers.

My concern is that if we do not gradually, but steadfastly, move away from price supports and production controls on grains, we will soon discover that Government programs have created the

[4] This information is referenced in Paarlberg, p. 179.

same predicament for grains as they have for cotton. U.S. cotton production during 1928–30 averaged 14 million bales, and other countries' production averaged 12 million bales. U.S. cotton production averaged 15 million bales and foreign cotton production averaged 50 million bales in the 1980's. Through the cotton program, the United States throttled cotton production and, by providing a price umbrella over the international market, encouraged foreign competitors to expand production. Similar results occurred for peanuts, tobacco, and sugar.

Agricultural economists have long been chided for naive use of the perfectly competitive model of markets. We have also been just as naive in using a model of perfectly effective Government intervention. We have too readily assumed that Government has the ability to organize and conduct itself in some mystical way to make precisely the right self-correcting interventions at precisely the right times and thereby remedy the "imperfections" the market is creating.

Much has been learned over the five decades 1930–80 concerning the economics of agriculture and the economics of agricultural policy. Better future policies might result if we could learn from our past experiences. The nine lessons worth emphasizing are:

(1) The farm problem has two dimensions: the low level of income and the instability of income.—Commodity programs are not effective ways to increase the incomes of low-income farmers as the benefits of commodity programs are proportional to production with the large farmers reaping most of the benefits. Small farmers' output is not sufficient to escape poverty, even with support prices at very high levels. Adjustment programs aimed at facilitating the transfer of low-income farmers into other occupations is the way to approach the low-income problem.

(2) Farmers respond rationally to economic incentives.—They are remarkably efficient in allocating resources given the technology and information at their disposal. The farm problem is not caused by irrational or perverse tendency of farmers' economic behavior. Frankly, much of the 1982 dairy surplus problem stems from logical decisions by dairymen in response to a milk price support pledge made in Wisconsin during the heat of the 1976 Presidential campaign. Despite the biological nature of the production process in agriculture and the immobility of agricultural resources, U.S. farmers have made and continue to make substantive adjustments in response to economic stimuli. For example, in response to the higher grain prices in the early 1970's, farmers increased crop acreages from about 300 million to over 350 million. Between 1966 and 1982, soybean production dubled and oats production was reduced one-half. Agricultural productivity continues to grow at a rapid pace.

(3) The upward trend in per capita food demand in the United States has stabilized.—The quantity of food consumed per person is about the same in 1982 as it was in 1972. It is limited by stomach capacity. Hence, future growth in food consumption in the United States will be due to population which is now growing at less than 1 percent per year.

(4) The domestic food market is highly inelastic.—Farm prices are volatile. The U.S. demand for food is such that it is almost

priceless in scarcity and worthless in abundance. This means that small changes in supply or demand can lead to large changes in market prices. Hence, due to the unique character of the supply and demand, agricultural prices are volatile. Changes in Government policies, weather, exports, and so forth, can wreak havoc in the marketplace and create waves that persist for years.

(5) Controls are costly.—Rigid production control programs such as that for peanuts, cotton, tobacco, and sugar impose costs on farmers, consumers, and taxpayers. Many of these costs are not as visible as a program payment, but they do have tangible economic consequences. By raising prices above the free market in both U.S. and international markets, they discourage consumption at home and encourage production abroad. They weaken our international competitive position and perpetuate production controls. They also provide a bad example for other countries which further shrinks our export markets.

(6) Expanded exports are fundamental to the future of U.S. agriculture.—Hopefully, we have awakened from the dream that the major challenge will be to keep pace with booming world food demand and to ration exports to our friends and withhold them from our foes. U.S. exports are facing increased competition. Foreign food production is expanding faster than U.S. food production. Exports must expand because domestic demand won't be sufficient for projected domestic supplies at prices acceptable to farmers. In order to expand output, the United States must continue to improve agricultural productivity and vigorously compete for foreign markets.

(7) The Government should not assume the full burden of coping with price instability unless and until it has perfect foresight.—Volatility in farm prices is attributed partially to unstable economic and agricultural policies. A modest sized Government grain reserve would add to stability. But, even under the best of circumstances, farm prices will not and should not be perfectly stable. Hence, farmers must manage their operations under price instability. They must reduce their risk by use of the future's markets, forward contracting, pooled sales, and diversification.

(8) Information needs are expanding.—Information is of little value in a stable and stagnant economy. Farmers can keep doing the same things in the same ways. Volative markets and changing technologies expand the value of information. The provision of objective, up-to-date information is precisely one of the most important roles that Government and the land-grant colleges play. Studies consistently show that public and private investments in technology and information pay huge dividends to society.

(9) The long-run potential looks good.—One year does not make a trend—nor do two or three. Despite the upheavals of the 1970's and the depression of the early 1980's, I am optimistic about the potential of an expanding and prosperous economy provided the opportunities are not stifled by excessive regulation, overzealous protectionism, and double-digit inflation. Nothing remains scarce for long provided producers and consumers have the opportunity to respond. The zigs and zags of economists' diagnoses of the farm problem are attributable to a considerable degree to their underestimation of the responsiveness of our economy to market incentives.

CONCLUSION

U.S. agriculture has made enormous contributions to the Nation and the world. U.S. consumers are abundantly fed despite spending a small share of their disposable income on food. So, why all the fuss? Matters could be worse, much worse. U.S. farm policy problems are quite modest compared to the problems caused by government intervention in agriculture in the European Economic Community, Soviet Union, Japan, and dozens of other countries.

The tragedy is that things could and should be much better for farmers, consumers, and taxpayers. For farmers, less involvement of Government would reduce the risks of having to rely on Government as their political strength dwindles. For consumers, less intervention by Government would prevent increases in the price of food caused by artificial scarcities and the capitalization of allotment values or rights to produce into production costs. For taxpayers, less Government intervention would mean lower Treasury expenditures on farm programs.

Reversing the direction of Government agricultural programs is not for the timid or weak at heart. Present Government programs are not without their benefactors. The transition to greater reliance on the market mechanism would have to be well-planned and unswervingly pursued. Admittedly, in the present turbulent waters of severely depressed net farm income, massive supplies, and pervasive Government programs, we must be very cautious about rocking the boat. But, part of our problem may be that we're paddling upstream.

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My thinking on this topic has been heavily influenced and reinforced by two excellent books (Paarlberg and Gardner).

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TRADE AND AGRICULTURE POLICY

(By Joseph Halow*)

I. GOVERNMENT

In your listing of topics for consideration I note the first topic is the one which deals with Government. This, I consider, to be proper listing, since Government intervention in the markets is the single most significant element affecting agricultural policy. Were it not, for example, for the 1980 grain embargo imposed against the Soviet Union early in the year, plus the current administration's negative posture on trade with the Soviet Union, domestic policy moves now considered to be incorrect or costly might not have been necessary, and the United States could probably have avoided abrupt shifts in its foreign trade positions. The United States would not have felt the need for its PIK and other acreage reduction programs, would not have needed to consider aggressively and abruptly the European Community's agricultural exports and Japanese agricultural imports. The reduction in U.S. agricultural trade has likewise undoubtedly led to a large share of the protectionist mood now quite prevalent on Capitol Hill.

One speaks of promoting exports to other countries, but most other countries are taking what they can of U.S. grains. The fact is that no country can actually replace another as a customer, for the United States needs them all, and this includes particularly the Soviet Union, which is one of the world's largest importers. There is another problem posed for U.S. exports in the strong protectionist mood in Congress and within the administration, which has alienated the Chinese and caused them to import from other sources.

In order for the United States to attempt to attack the U.S. agricultural problems—which threaten to worsen, not improve—it should look at the problems honestly and focus on them. It should not attempt to sweep them away by attempting to cover them over with various domestic programs and to overcome them by shifting attention to other areas.

In this regard it would be vary essential to return to the U.S. Department of Agriculture the responsibility for agricultural exports. The other agencies can only control; they do not promote exports. It would likewise, be as much a mistake to seek a solution through creation of a Department of Trade, which could merely dilute still further the responsibility for agricultural exports. When the USDA had the responsibility, exports were expanded, helping clear the way for the agricultural boom of the 1970's. Without any responsi-

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bility for domestic U.S. agricultural programs the other agencies can only be interested in controlling exports to serve the various goals assigned to them. Government, that is, the people, should decide the purpose for which agriculture should exist and then pursue the goal. If that goal is to provide the Nation with an adequate food supply at prices which the people can afford to pay, as, indeed, it is and must be, then its purposes are quite clearly delineated. They do not support interference from outside forces which tend to deter the United States for pursuing that goal.

In the past, Government usually stepped in to help farmers in problem years. At the present time this is quite different, for the moves which might be contemplated by Government—that is, the type of programs it has instituted in the past several years—would now, for the long term, be far more detrimental in the short term than they would be helpful. This is because of the difference in the world's trading patterns, and the high level of world grain trade.

II. PROGRAM OPERATION

Unless Government realizes what it is doing to private enterprise in agriculture and is aware of its responsibility, agricultural programs will be be of very little benefit. They will tend only to complicate still further what is already a serious problem. They will also gloss over the causes of the problem, making it impossible to identify. For, rather than acknowledge its errors and move to correct them, Government has attempted to shift the focus of attention to other issues, on which its action has, therefore, also been less than correct. The agricultural problems are long term and international, but Government is attempting to address them with short-term domestic actions. Government programs tend, in fact, to treat symptoms, rather than the basic, fundamental problem. Government is now, and for budgetary reasons, attempting to impose limits on the continuation of its domestic price support system, despite the fact that it was Government action which made such expenditures necessary. It was not, as frequently said, the U.S. farmers' ability and willingness to produce.

In my opinion, in order to strike a better balance and help correct the situation, Congress should play a key role in developing agricultural policy and in supervising its proper implementation by the executive branch. As indicated above, however, it is quite important that the USDA be solely responsible for the promotion of agricultural exports and administration of domestic agricultural programs. It has become obvious that even domestic agricultural decisions are very strongly influenced—if not actually mandated—by other Government agencies who do not have responsibility for agricultural production or to the farmers (witness the recent press accounts of the USDA's efforts to freeze or lower the grain target prices, found to have really been in response to an effort by the Office of Management and Budget).

III. POLICY

It is also obvious from the preceding comments that there appears to be very little use for additional Government programs, and some current ones appear questionable. The PIK program is

already branded as a very expensive program, the real costs of which are yet not really known and which will certainly far exceed the costs of as much as $12 billion which can be directly attributed to the program. The PIK program is sending the wrong signals to the U.S. overseas customers. The other world suppliers are not limiting but are actually encouraging further production. If they do this they will then be in an even better position to supply the world's grain needs. They will, in fact, be forced to if they succeed in producing larger supplies. A program of production loans is, however, quite necessary in the United States, but it should not serve as a form of price guarantee to farmers. Such farm supports should be only in the form of loans to encourage a uniform production from year to year, and that production should be geared to the extent of domestic needs and the highest possible level of exports. Any agricultural policy should recognize the fact that U.S. agriculture must be based on its ability to export, for it cannot exist efficiently if it is geared only to domestic consumption requirements.

If and when, however, Government interferes with the export outgo from the United States, thus limiting the farmer's right to the marketplace and his ability to earn through his own sales, then it must be prepared to recompense him for this through some form of payments. Since this comes actually not from the Government's own funds but from those paid by the taxpayers, it should likewise be clear to the taxpayers what it is they are paying and why.

IV. COST

The cost of U.S. agriculture is currently growing, and the administration is now seeking means of limiting its own budget exposure to the costs of agriculture. As implied above, if the Government were not limiting the U.S. farmers' ability to export their production it would not be liable to them for the cost of programs. The proof of this is that during the mid-1970's U.S. farm costs had dropped to virtually nothing. They began to grow again as the United States became more involved in controlling exports and the responsibility for agricultural exports went from the USDA to other agencies. The cost of farming could be eased for the taxpayer if and when farmers may export freely. Farming can be financed only by Government or the export markets.

V. PRODUCTION CONTROLS

As indicated above, no production controls should be instituted unilaterally in and by the United States. Other countries have demonstrated that they are eager to obtain a portion of the U.S. share of the world markets, and they will increase their production when the United States decreases its production. Rather than decrease production, the United States should consider the other aspects of supply management, that of disposing of surplus stocks. The United States should be more aggressive in the export markets. Rather than expend money to have farmers decrease their acreage, moneys should be used to expand exports.

VI. DOMESTIC POLICY IN A WORLD ECONOMY

Those who would have the United States cease its dependence on the world markets for its grain surpluses are essentially living in the distant past. The only means of continuing to supply food at comparatively low prices to the American public is to produce to the extent one can and then export the surpluses. If this is not done, U.S. agriculture continues to shrink, with the farmer exacting higher unit prices for his production. Only through volume production can the U.S. farmers produce for the domestic market, but they must then have the export markets as a funnel for the excesses. In this manner the export markets tend indirectly to subsidize U.S. agriculture and domestic food consumption. This is a very important and inescapable fact which appears, nevertheless, to have been forgotten by those policymakers in the United States who would use agricultural exports as a foreign policy tool.

VII. TRADE

Although U.S. trade in agricultural products has been jeopardized by the unfair trading practices of other countries, such practices are encouraged and even aided by the inconsistencies of U.S. agricultural policies. A U.S. policy which would encourage countries which compete with the United States to increase their own production to help feed the world's hungry is obviously designed to make them compete with us for the commercial markets. A U.S. policy which has encouraged the European Community and done this while watching the Community set up its common agricultural policy can, after silently witnessing it in action for about two decades hardly now complain that it is suddenly unfair. The Europeans who know it is unfair cannot understand the difference in the U.S. posture. If the United States wants to combat the unfair trading practices of other countries it must now be prepared to fight in kind with them. The United States must be prepared to subsidize and continue to subsidize its exports if it expects to make its demands felt by the opposing country.

A DESCRIPTION OF POLICY ALTERNATIVES

Congress will face several alternatives in dealing with agricultural commodity programs when existing farm legislation expires with the 1985 crops. The spectrum of alternatives ranges from Government management of agriculture as a public utility, to getting the Government out of agriculture altogether. Apart from these parameters the following is a partial list of some options which Congress could consider.

I. EXTEND CURRENT PROGRAMS

The major features of commodity programs applicable to the 1981 through 1985 crops of specified commodities are established in law. Congress could simply provide that these very same features would be applicable to the crop years 1986 through 1989, or some other combination of years.

Congress would still need to decide the level of target prices and loan rates for each of the crop years. In 1981, Congress selected certain fixed support levels for each year.

In future years, Congress could base the support levels on some formula or moving index, such as parity or cost of production. A Cost-of-Production Standards Review Board was established by the 1981 farm bill, and their report could provide useful information for evaluating USDA's estimates of farmers' costs of production. An index based on market prices is discussed later in this paper.[1]

Whatever the method for calculating support levels, it is certain that budgetary concerns will be a top priority in 1985 due to the record levels of spending on farm programs under the current act.

II. REDUCE U.S. PRODUCTION THROUGH MORE EFFECTIVE CONTROL MECHANISMS

(A) Mandatory production controls

A most direct way to prevent surplus production in the United States would be to impose mandatory limits on production. Inasmuch as voluntary acreage reduction programs have proven costly and less than effective, these would most likely need to take the form of marketing quotas and/or acreage allotments, such as were in effect for wheat and other commodities in earlier decades. A referendum among farmers would probably be conducted to determine whether such programs would be imposed.

[1] This paper was prepared by Ron Wilson and Bill Brooks of the Senate Agriculture Committee staff and Penny Cate of the Food and Agriculture Section, Congressional Research Service. The views expressed in this paper do not necessarily represent the views of the chairman or any other member of the committee.

Mandatory limitations imply support levels above market clearing prices. At the same time, however, they would limit Government outlays to the restricted amount which could be produced within the controls. Mandatory controls might be accepted by farmers because they would be imposed across-the-board. This would prevent some U.S. producers from having a free ride by receiving the benefit of higher prices caused by high participation in voluntary supply control programs, yet not participating themselves. Foreign producers would receive such a benefit, however.

Mandatory limitations on domestic production would by definition restrict farmers' traditional independence in making planting and marketing decisions. These strict production limitations would likely impose higher costs on consumers and users, such as those who feed grain to livestock, and would cause the United States to lose a substantial share of world markets because of less competitive prices. Reduced exports would tend to increase domestic unemployment in export-related businesses and reduce America's already serious imbalance of payments in trade.

(B) Strengthen voluntary programs

Another option would be to make existing voluntary programs more effective in reducing production by a number of revisions, such as by eliminating the haying and grazing and summer fallow provisions of the wheat program. The acreage bases from which production cuts are made on each farm could also be reevaluated and reduced.

Cross compliance and offsetting compliance could be required, so that a farmer would have to participate in all crop acreage reduction programs and on all farms in order to receive Commodity Credit Corporation loans and target price protection for any crops. In fact, participation in production control programs could be required in order to qualify for assistance under other USDA programs, such as Farmers Home Administration loans, soil conservation payments, or Federal crop insurance.

These changes would tighten the production controls, but they are certain to make the programs less attractive for producers, who would then be less willing to participate. High production from nonparticipating farmers would offset the effects of the more stringent production controls, so the net result might be that total U.S. production would not be significantly reduced. In addition, cross compliance would complicate the administration of other programs and could be difficult to enforce.

(C) Long-term land retirement

As opposed to the annual programs discussed above, multiyear measures could be used to cut surpluses if agriculture is to be burdened by excess production capacity for a number of years. Secretary Block recently announced a program targeted at areas of high soil erosion which involves taking land out of production for 5 to 10 years.

The soil bank, established by the Agricultural Act of 1956, provided for long-term (up to 10 years) land retirement for both conservation and supply control purposes. A major objection to this

plan was that rural communities were disrupted when large numbers of farmers took their entire farms out of production.

(D) Problems caused by production controls in a world economy

Production controls of various forms have been used in the United States for many years. However, such programs may have been more effective when the U.S. agricultural system was producing primarily for a domestic market, rather than the export-oriented markets of today. U.S. agricultural exports have gone from $6.7 billion in 1970 to over $40 billion in 1980, and are estimated to be $37.5 billion in 1984.

The United States is now the world's leading exporter of agricultural products, exporting nearly one-fifth of the world's total agricultural exports. The foreign market takes crops from 2 of every 5 acres harvested in the United States, and more than half of the rice, wheat, soybeans, and cotton. Thus there are international consequences from U.S. actions to cut production.

When the United States unilaterally cuts production, or sets high loan rates and target prices, other exporters tend to expand their production of those same crops. From 1982–83 to 1983–84, for example, production of wheat fell by 14 percent in the United States but increased in other major exporting countries by 7.3 percent. This leads to a reduced market share for U.S. exports, a smaller outlet for U.S. production, and more opportunities for competing countries.

These results could be countered by eliminating production controls or by getting other exporting countries to join the United States in controlling production. There is not much incentive for other countries to do so as long as the United States is willing to bear the entire burden of supply adjustment by itself. International agreements have been tried in the past and found to be more useful in providing for the exchange of information than in controlling international trade. However, if the Congress decides to maintain a high level of price supports and imposes more stringent production controls to keep the Treasury costs of such a policy under control, a major effort to divide up world markets with U.S. competitors might likely be attempted.

III. INCREASING MARKET ORIENTATION IN FARM PROGRAMS

(A) Market-sensitive loan rates

In 1981, Senator Helms proposed a farm bill which would have set loan rates for the major grains, soybeans, and cotton as a percentage of market prices. Specifically, the percentage was to be 75 percent (85 percent for wheat) of 5-year moving average of annual cash market prices for each commodity, not counting the high year and the low year.

A similar proposal applicable only to soybeans was offered by Senator Jepsen and adopted by Congress. The provision also prohibits the Department of Agriculture from including soybeans in any reserve or production adjustment control program. As a result, the soybean industry is well-positioned to compete in world markets with a minimum of Government involvement. During the years when this program has been in effect for soybeans, the soy-

bean economy has been characterized by low Government costs and high market prices. Thus, one option for Congress to consider would be a system whereby loan rates are established based on a percentage of the market price.

The upland cotton loan rate is also calculated on the basis of a market-price formula. The historical rationale for market orientation was stated by the National Cotton Council of America in testimony on the 1981 farm bill, as follows:

"In the 1960's, we were dependent upon Government—and Government money—to help solve a problem that was at least partially caused by Government. The old Government farm programs that set price support loans at artificially high levels made our cotton noncompetitive with foreign growths and with synthetic fibers. By the early to mid-1960's the result was a surplus of around 17 million bales of cotton.

"With that kind of surplus overhanging the market, there was no way in those days to even consider a strictly market-oriented program. For this reason, cotton people had to depend upon Government to reduce production through paid diversion and to supplement income through direct payments.

"And while the surplus was finally worked out and the prescription eventually brought about a cure, this was not a happy time for cotton people * * *.

"But as the 1970's began, things took a turn for the better. The surplus had been eliminated and cotton people found themselves in a position to talk about getting income from the market rather than from Government * * *.

"The lessons of the 1960's are still very clearly focused in the minds of the cotton leadership. Never again must cotton allow Government—for political or other reasons—to price it out of the market by setting loan rates too high. This is the primary reason why the cotton title so carefully and precisely sets the loan rate at a percentage of the market price, thereby assuring that the loan will not interfere with cotton's ability to compete."

A system based on market prices would tend to keep U.S. commodities price competitive and prevent tinkering with loan levels. It would use market information which is freely available at all times to farmers and the public at large.

Even so, a moving average of market prices might still interfere with current prices in a given year, if prices move sharply from year to year. Producers may desire a support level higher than that produced by market formulae, but this may be less important if surpluses are reduced through increased exports as a result.

(B) Administrative flexibility in setting loan rates

In 1981, the Reagan administration submitted to the Congress a proposed farm bill providing discretionary authority to the Secretary of Agriculture to determine loan rates based on the Secretary's evaluation of supply and demand, world markets, and other factors.

Flexibility in determining the loan level allows programs to be more responsive to changing market conditions and unforeseen developments, and could allow them to be operated at less Govern-

ment cost. At the same time, administrative flexibility may mean increased uncertainty for others involved in agriculture.

The 1981 farm bill provided for minimum loan rates, which the Secretary of Agriculture may go above in determining loan rate levels each year. However, if market prices are within 5 percent of the loan rate, the Secretary is authorized to reduce the loan rate by 10 percent, but not below certain lower minimums. For the 1984 crop of wheat, this authority was triggered and used to reduce the wheat loan rate.

In 1985, one set of policy options for Congress would be to establish the minimum loan rates at significantly lower levels than current law or to provide for loan rates which could be adjusted by the Secretary up or down by a set percentage each year. Alternatively, such flexibility could be authorized only in certain conditions or for certain purposes. For example, the Secretary could be authorized to set the loan rate at whatever level would be necessary to counteract the effect of a strong dollar or foreign export subsidies on world markets.

(C) Income protection which does not interfere with markets

During the early 1970's, there was a recognition of the benefits of lowering loan rates to world market levels, yet there was also a desire to provide income protection to farmers. Target prices were seen as the answer. This system allowed loan rates to be set at market levels, which encouraged efficiency in production and marketing and allowed U.S. products to be price competitive in world markets. At the same time, farmers could be assured of income protection because they would receive direct payments if commodity prices were below certain target levels.

In other words, farmers received a degree of income stability while markets were allowed to function efficiently. Senator Milton Young is credited as the father of target prices, which were included in the 1973 farm bill. Earl Butz, who was Secretary of Agriculture at the time, supported target prices as a transition measure to move from rigid price supports to a market sensitive pricing system.

With a resultant drop in loan rates and the devaluation of the dollar, U.S. farm commodities became price competitive in the world market at the same time world demand was booming. During the early 1970's, agricultural exports expanded rapidly and farm income reached record levels.

Direct payment programs and more flexible loan rates were not new—they had been tried previously in various forms with mixed results. However, these programs seemed to work well in the economic conditions of the early 1970's, if low Government costs and high farm incomes are any indication.

Loan rate levels were gradually increased during the decade of the 1970's. They were increased further by President Carter after the grain embargo he imposed in 1980. Congress mandated even higher loan rates in 1981 and 1982. Some analysts are concerned that loan rates are interfering with world markets, and that loan rates are being relied upon to provide both price support and income support as they did prior to 1973. This has led to lost export

sales, inefficient production, high Government costs, and increases in production abroad.

If loan rates were to be made more market sensitive, Congress could consider the following alternate means of protecting farmers' income:

(1) *Target prices (described above).*—Some farmers and others have a philosophical aversion to receiving a direct income transfer in the form of a Government check, which is what target prices provide. Some agrue that these payments are not well-targeted, in that they are made to every eligible producer of the crop in question regardless of whether that producer has sold his crop for a profit or loss.

However, the existence of target prices provides farmers with income protection, so there is less need from the farmers point of view to increase loan rates for that purpose. This allows greater flexibility to set loan rates at market-clearing levels. However, as target price levels rise, there may be budgetary pressure to increase loan rates so as to limit budget exposure by providing a larger share of benefits in the form of loans, rather than nonrecoverable direct payments. Target prices provide an incentive for farmers to participate in Government acreage reduction programs, but in a general sense, they may also induce surplus production by minimizing risk and encouraging outside investment in agriculture.

Most of the concern about target prices has focused on the dollar level at which they are to be set. The 1977 farm bill provided for target prices to be adjusted annually based on changes in farm costs of production. The 1981 farm bill mandated specific, annual increases in target prices. The subsequent drop of inflation in 1982 and 1983 has resulted in real target prices higher than Congress anticipated.

During the late 1970's, farmers were concerned that target prices did not increase fast enough to keep up with rapid inflation. When inflation was dramatically reduced in the 1980's however, the increasing target prices became very costly, which has resulted in policy decisions aimed at massive efforts to control production. To avoid these difficulties, one option for Congress to consider is for the target price level to be left to the discretion of the Secretary of Agriculture or to be set at a specified percentage of the loan rate or average market prices.

Alternatively, target prices and loan benefits could be targeted more directly to certain types of farmers. Higher levels of income protection could be made available to smaller farmers, for example. Such a system could be very arbitrary and difficult to administer. In fact, there may be cases where a highly leveraged large farm is faced with a more difficult short-term cash flow problem than faced by a well-managed small farm with low production costs. Current programs do not fully address the unique needs in each size class. In short, present policy is a very blunt instrument.

In 1981, the Senate Agriculture Committee considered a proposal to eliminate target prices altogether (see below). The committee voted to reauthorize target prices by a slim margin on an 8 to 7 vote. In 1985, the committee may once again decide whether or not to continue target prices. An alternative would be a phaseout of target prices, for example, by authorizing them only for the first 2

crop years of a 4-year bill. Of course, the committee would retain the option of extending them again at the end of the 2 years if they chose.

(2) *Private sector.*—Producers of beef, pork, poultry, fish, and some cash crops have generally relied on the private sector for their income. Income protection and risk management can take several forms: Improved recordkeeping and business management, vertical integration, hedging, contract growing, off-farm employment, hiring specialized consultants, or joining a supply or marketing cooperative.

In 1981, the Reagan administration took the view that target prices were unnecessary because farmers were capable of achieving income protection for themselves through the private sector by using orderly marketing, improved management, the futures market, CCC loans, a farmer-owned reserve, and other means. The administration proposed to eliminate target prices, but Congress did not adopt the proposal.

The ability of a farmer to achieve some measure of income protection in the private sector varies significantly between individuals. A necessary element of this policy would be a strong research and education effort involving lenders, private industry, land-grant universities, and the Cooperative Extension Service.

(3) *Agricultural options.*—One specific new means of achieving income protection in the private sector is the trading of agricultural options. An option is a contract that gives the purchaser the right, but not the obligation, to buy or sell a commodity (or a futures contract based on that commodity) at a set price on or before a set date in the future. The buyer pays a one-time premium to purchase the option contract.

Agricultural options could allow farmers and processors to protect themselves from unfavorable price movements without foregoing the opportunity to take advantage of favorable price movements. For example, a farmer might acquire an option to sell corn at a certain price next harvest. When harvest arrives, if market prices are below the option price, he can exercise his option and sell the corn as provided in his contract. However, if market prices are higher, he can disregard the option and sell the corn on the cash market. In effect, he can take advantage of whichever price is higher.

In this way options provide greater flexibility than either cash forward contracts or futures contracts. The buyer of the option must pay the premium whether he exercises the option or not, but he (and his lender) are not subject to additional margin calls as they might be in the futures market. Thus options could minimize risk, while still allowing an opportunity for reward.

The Futures Trading Act of 1982 contains an amendment adopted by the Agriculture Committee at Chairman Helms' suggestion which allows trading in agricultural options to occur, subject to the approval of the Commodity Futures Trading Commission. The CFTC has announced a pilot program under which limited trading in agricultural options could occur during 1984.

(4) *Income insurance.*—The 1981 farm bill contains a provision adopted by the Agriculture Committee at Chairman Helms' suggestion requiring a task force to study and report on farm income pro-

tection insurance. The concept is that a farmer could purchase a policy which would provide him payment if income fell below the insured level.

The task force identified the ideal characteristics of an income insurance program, studied alternatives, and concluded that the most desirable approach would be to combine yield insurance with supplementary revenue insurance. The task force stated that important questions about the concept remain to be resolved, and that the substitution of farm income insurance for all Federal agricultural support programs is not advisable at this time. However, the group recommended initiation of a pilot program for a selected commodity over a trial period of 3 years.

Some analysts believe that income insurance could help stabilize income in the farm sector in a less intrusive and more cost-effective manner than current methods. In Canada, the western grain stabilization program provides income insurance to wheat producers, with the Canadian Government and wheat producers contributing to the insurance fund in a 2 to 1 ratio.

In the United States, producer participation would be influenced by the fact that farmers now can receive income protection simply by participating in Government production control programs. If farmers had to pay for the protection directly, producer acceptance might be low, as was initially the case in the Government's natural disaster crop insurance program. A program offered by the private sector with Government-subsidized premiums, for example, could offer protection to farmers while minimizing the Government's involvement in the day-to-day decisions of farm operators.

(5) *Direct supplementary payments.*—The simplest way to provide income protection from the Government might be to make direct payments to producers when income falls below certain levels. This would be similar to target prices, except that payments would be triggered by income levels rather than the price of one specific commodity. Such an approach would not necessarily be targeted to the area of greatest need, but it might be simpler to administer than existing programs and it would avoid market distortions caused by linking payments to specific commodities.

(D) Limited reserves

In 1985, Congress will consider what type of commodity reserves policy to adopt for the remainder of this decade. If there was no Government reserve program (as is the case with soybeans) it is likely that reserves would be held by the private sector. Farmers, processors, and exporters would hold stocks at their own expense and would be free to take advantage of favorable price movements.

However, since 1977, Congress has provided for a farmer-owned reserve program for wheat and feed grains. This program provides for multiyear CCC loans with the crop as collateral. Under the program, USDA makes payments toward the cost of storing the crop and producers agree to store the crop until market prices rise to certain levels. In this way the reserve can absorb grain supplies when surpluses are large and prices are low, and then in the future release stocks of grain when supplies are low and prices are high. The intent is to moderate the extremes of price fluctuation—the

boom and bust—in a way that provides stability to both producer and consumer.

When reserves rise to very large levels, they tend to have a depressing effect on market prices and they require larger Government expense for storage payments. However, the public may desire to have buffer stocks of foodstuffs on hand for those times when crops are inadequate.

Reserves tend to reassure export customers that the United States will be a reliable supplier of grain. They also provide the livestock and poultry industries a continued supply of feed. However, massive Government-owned stocks can be disruptive to marketing. Some analysts believe that the current farmer-owned reserve has gone beyond its original role of providing buffer stocks, and has become an artificial market for which farmers may be producing. If the Government is to have a reserve program at all, USDA will likely seek flexibility to limit the reserve and adjust incentives for participation as necessary to meet changing conditions.

(E) Agricultural research and improved technology

One means of improving farm profitability without direct Government payments to farmers would be to increase the emphasis on agricultural research and the adoption of high technology in agriculture.

Improved methods for cost-effective production can enhance the profitability of those farmers who adopt them. The American system of land-grant universities, State experiment stations, and cooperative extension services is designed to develop improved practices through agricultural research and to encourage their use. Many believe that Government expenditures for research have been among our Government's most productive investments.

New innovations in agriculture and emerging technological developments in agriculture can have a significant impact on production and efficiency. Genetic engineering, increased computerization, and other innovations can help improve the individual's productivity.

However, such techniques may not be available to the average producer at a price that is currently cost effective. If a producer does acquire these techniques, the techniques may bring down the per unit costs of the individual who adopts them, but they may also increase the total supply of commodities and hence lower the prices. Necessary market adjustments would follow.

A progressive agricultural system with adoption of new technology in the private sector can be an important component of market-oriented agricultural policy.

(F) Export marketing

A necessary element of a market-oriented approach is aggressive export marketing. This could be done by countering foreign export subsidies, resisting protectionism at home, and implementing new tools to expand reports.

To counter foreign subsidies, the United States could directly subsidize export prices, buy down interest rates, or use surplus commodities in an export payment-in-kind program. The USDA

blended credit program and the wheat flour sale to Egypt have been highly successful marketing initiatives.

Protecting foreign markets may mean resisting protectionism in the United States. For example, most farm groups have opposed domestic content legislation as being protectionist and having the potential to severely damage agricultural export markets. They argue that if this requirement were to be imposed on automakers, it would invite retaliation and reduce other countries' ability to purchase U.S. farm products.

Similarly, domestic requirements, such as the cargo preference requirement on U.S. foreign aid shipments in an effort to protect the maritime industry, have an effect on agricultural exports. This requirement imposes a real cost to farmers and taxpayers. One option would be to eliminate this requirement. However, proposals are being made to expand this requirement to include commercial sales, which could harm foreign customers for farm exports.

Rather than simply reacting to the measures described above, the United States could aggressively act to provide several new tools to expand exports. These might include additional USDA export credits and credit guarantees, an intermediate credit program, an export credit revolving fund, bilateral agreements with those countries which desire them, and assurances that the United States will be a reliable supplier.

Policy alternatives in the agricultural trade sector need to be explored further. The above history is by no means complete, but it clearly establishes the agricultural policy crossroads at which American farmers find themselves as we contemplate the future.

THE GREAT DEBATE ON MANDATORY PRODUCTION CONTROLS

Note: The following debate took place as part of an Agricultural Outlook Conference at North Carolina State University during 1983. As an exercise in roleplaying, two noted agricultural economists were asked to state the arguments for and against mandatory production controls. The positions taken in the debate do not necessarily reflect the actual views of the economists or their universities.

THE CASE FOR MANDATORY PRODUCTION CONTROLS

(By Ronald D. Knutson[1])

In the 1930's under the leadership of President Roosevelt, the U.S. Congress enacted into law a series of New Deal farm policies. The basic tenant of those policies was that American agriculture is so inherently unstable and has such a great capacity to overproduce, that the free market cannot be relied on to adjust production to market needs at realistic farm prices and incomes. The basic tenant of New Deal farm policy is as relevant today as it was in the 1930's.

I am, therefore, resolved that the U.S. Government should adopt a system of mandatory supply controls on all major farm commodities. In this resolution, adopt means to enact into law and implement subject to two-thirds producer approval in a referendum covering all producers of corn, sorghum, soybeans, wheat, cotton, rice, peanuts, and tobacco. Mandatory supply controls means that all producers would be required to participate in the program to be specified later in greater detail.

THE CASE FOR CONTROLS

The case for mandatory supply controls has three aspects that are crystal clear, have been time tested from actual experiences, and cannot, therefore, be refuted:

—The problem of agricultural stability is at least as great as, and probably greater than, it was in the 1930's when the first production control programs were enacted into law.

—Experiments with market-oriented farm policies have been a miserable failure.

[1] Professor and extension economist, Agricultural and Food Policy Center, Texas A&M University System.

—The very concept of the free market in agriculture is the product of ivory tower theoretical economists' imagination. It has little or no real world relevance.

Each of these aspects is critical to the case for mandatory production control policies. They, therefore, deserve further elaboration—even though they are self-evident to any clear-thinking individual who has had exposure to the real agricultural world.

Instability

The inherent instability of farm prices and incomes has its origin in the economics of the supply and demand for farm products. Within a given production season, both farmers and consumers are basically unresponsive to price changes.

—The farmer has so much land that is going to be farmed regardless of the price level. Once the crop is planted, output is predetermined and subject only to the vagaries of weather and pestilence.

—Consumers have to eat regardless of the price. Therefore, if production of all commodities is reduced and price is increased, there will be little decline in consumption.

The result of small shifts in supply due to weather or government programs is a proportionately larger price change. For example, a 10-percent rise in U.S. production can easily reduce price by 20 percent or more. Net farm income can drop by an even larger percentage. Likewise, when a Presidentially imposed embargo reduces exports by 10 percent, prices can fall by an even larger percentage. The impact on farmers is devastating—higher debt burden, increased stress, bankruptcy, and the demise of family farm agriculture.

The supply and demand for farm products change regularly but unpredictably. Weather variation is only part of the cause. Political decisions impacting the value of the dollar affect the U.S. competitive position in the export market. Export embargoes can sever export opportunities with the stroke of a pen or the lash of a tongue.

The net effect is to put farmers on a roller coaster—booming when the economic climate is favorable and busting when it is not. The problem is that there are more busts than booms!

Failure of market-oriented policies

Agriculture has been on that roller coaster since the late 1960's. Net farm income went from $19 billion in 1972 to $34 billion in 1973, down to $19 billion in 1976, up to $31 billion in 1978 only to return to $19 billion in 1982. Would it ever be nice to return to the agricultural economic conditions of the 1950's and the 1960's. Farm income was not all that great, but it was dependable.

What happened in the 1970's? The main thing that happened is a change to a market-oriented farm policy. And market-oriented policies provide only a taste of what agriculture would be like under free market conditions. Under these policies the Federal Government has spent from $3 billion to $21 billion on commodity programs. For most middle-size farm operations, the net result was more debt, more risk, and a reduced chance of survival.

—Price variability increased fivefold from 1955-63 to 1972-78.

—Cash receipts doubled in variability.

—Farm incomes were three times more variable.

The result of this variability has been unmitigated disaster for many farmers and ranchers. Those who guessed wrong were frequently put out of business. Mistakes were made in what to plant. Mistakes were made in when or how to market. The bottom line was reduced real farm income—down 25 percent since 1972.

Free market, a myth

One of the main factors that has made market-oriented farm policies such a disaster is that the very concept of a free market does not exist. The verification for this statement lies in the following realities:

—In the past decade, four export embargoes have been imposed by three Presidents of two political parties. Embargoes are not free market policies.

—Three of the four major wheat exporting competitors of the United States (Canada, Australia, and Argentina) are state traders. That is, the Government officials or marketing boards make the decisions on prices and quantities of exported commodities. The fourth major competitor is the European Economic Community which has used export subsidies to expand its market position in wheat. Likewise, all major cotton exporters are state traders—the largest of which is the Soviet Union.

—Likewise, 80 percent of the wheat exports are purchased by state traders.

—State traders are not limited to the use of tariffs, quotas, or subsidies to impede trade. They can simply decide not to buy or sell. These decisions are, themselves, barriers to trade and never subject to GATT, the General Agreement on Tariffs and Trade.

These are clearly not free market conditions; they are commonplace; therefore, *the free market does not exist.*

THE MANDATORY PRODUCTION CONTROL SOLUTION

To be effective a mandatory production control program must apply to all commodities and regulate the quantities of products marketed by all producers. Specifics of the plan include:

—All producers would be issued a volume base quota specifying the average quantity of product that has been marketed annually over the past 5 years.

—The Secretary of Agriculture (with the advice of a producer, consumer, and user advisory board) would determine the proportion of the volume base that could reasonably be expected to be marketed in domestic and foreign markets at a price equal to the average cost of production by tenant (crop share lease) farms. Marketing quotas would be determined by multiplying the proportion of the base volume needed by each producer's base quota. The marketing quotas would be announced before planting season begins.

—Producers would be allowed to harvest in excess of their marketing quota, but would have to bear the cost of storage until their production fell short of their marketing quota or until they were able to acquire quota from another producer.

—Quotas would be transferable among producers at the going bid-offer acceptance market price. No geographic limits would exist on transfer.

—The Secretary of Agriculture could, after consulting with the advisory board, acquire and hold commodity stocks. Such stocks would consider quantities already held by farmers in anticipation of potential adverse weather conditions.

PLAN SOLVES PROBLEMS

This plan would solve each of the three basic aspects of the farm problems outlined previously.

—It would remove much, if not most, of the instability inherent in American agriculture. Production would be in accord with market needs inasmuch as marketing quotas would be adjusted annually consistent with needs. Any potential shortfall would be overcome by farmers holding commodities in storage in anticipation of reduced yields. Government stocks would be the last line of defense against potential shortages.

—It would overcome the gross inadequacies of both current market-oriented policies and of free market policies. Attempts to voluntarily control production have been a dismal failure. Farmers compensated for the mandatory acreage allotments in the 1960's by adopting new technology, farming more intensely, and thus increasing the yield per acre. In fact, yields increased faster than acres could be removed from production. Without production controls, there is great capacity to overproduce.

—The proposed marketing quota plan overcomes these inadequacies. It specifies the exact quantity that can be marketed and, thereby, effectively controls production. It does this in anticipation of market needs, not after surpluses or shortages have already appeared. At the same time, transferable quotas allow production to adjust among farms and regionally consistent with principles of comparative efficiency.

—The plan recognizes that the free market does not exist. It fights economic fire (bankruptcy prices) with economic fire (supply management). Commodities will be unavoidable to state trading importers at otherwise unprofitable prices. If embargoes are imposed, marketing quotas will be cut back in recognition of reduced markets. Farmers will no longer be at the end of an economic whip. Instead, they will be in the driver's seat.

Therefore, be it resolved that the Government should, indeed, adopt a system of mandatory controls on all major farm commodities.

THE CASE AGAINST MANDATORY PRODUCTION CONTROLS[1]

(By Bruce Gardner [2])

Whatever the flaws of the market as a regulator of our agricultural economy, it is folly to expect a better result from mandatory production controls. In making this judgment we do not have to rely on conjecture, theory, or speculation. We have experimented, for different commodities at different times, with unregulated commodity markets, CCC loans and purchases, direct payments to farmers, buffer stocks, crop insurance, credit programs, and voluntary acreage and production reduction as well as mandatory production controls. Of all these options, mandatory controls have been least successful. Only two mandatory control programs remain, in tobacco and peanuts. The defects, indeed the futility of this approach as a long-term solution to agriculture's problems is apparent in both cases, especially tobacco.

WHO IS BETTER OFF WITH MANDATORY CONTROLS?

If mandatory controls are a desirable policy, they must make some citizens better off. But who?

Consider consumers and taxpayers. The motivating force behind some experiments with production controls is a desire to save money for the U.S. Treasury, and hence taxpayers. This has occurred when commodity programs become far out of line with market realities, as for dairy in the past few years, so that budgetary costs of price supports or payments become larger. (Even for dairy, though, we are not trying mandatory controls.) The production control approach is aimed to reduce budgetary costs by driving market prices up. Of course, this does not really save money. For if the program is going to provide support for the commodity at a given level, someone must pay. Every dollar less from the Treasury means, roughly, a dollar more from consumers.

Consider livestock producers. They have often been neglected in policy formulation for the grains. A production control program, however, brings their interests to the fore, because feed is a cost to them. The higher feed costs must be either passed on to consumers or absorbed by livestock producers. It would be overoptimistic of livestock producers to suppose that the full costs of a permanent crop production control program could be passed on.

Consider agribusiness and rural communities. Production controls reduce the scale of activity in farming. This means idle capacity for farm product handlers and processors. It means less busi-

[1] Presented as part of a debate, this discussion is one sided, but only mildly exaggerated.
[2] Department of Agricultural Economics, University of Maryland.

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ness for the farm supply industries. It means, generally, hardship for the whole rural community. This isn't just conjecture, as the experience with PIK in 1983 clearly showed.

Consider the grain producers themselves, whom the control program is aimed to help. We should recognize first of all that production controls today will have less of an effect on prices than they once did, because demand for farm products has become more responsive to price. The reason is the importance of the international market and the increasing availability of substitutes for the grains. Today, if we support prices by forcing U.S. farmers to produce less grain, the prime beneficiaries will be foreign producers of grain and U.S. producers of competing commodities such as sugar beets and cane.

Think about what permanent, mandatory production controls will do in some other areas:

Stability. Production controls would not create more stable markets. U.S. output would still fluctuate primarily because of weather and other yield-influencing events. Demand would still fluctuate primarily because of world demand and non-U.S. output. The only semblance of stability arises when our agriculture becomes so small in scale that the output variations don't seem as noticeable.

International competitiveness. U.S. agriculture is working to build export markets and a reputation as a reliable supplier. Production controls would negate these efforts. And we provide an umbrella under which other countries can expand their output and share of world markets. For this reason, even an experiment with large-scale controls would have severe risks of the same kind as our experiments with export embargoes.

Production efficiency. U.S. crop production has been one of our most dynamic economic sectors, with rates of productivity growth far above average. Mandatory controls would place this record in jeopardy. We would constrain the ability of our most progressive, low-cost producers to expand, and protect the high-cost producers. We would not permit the sector to respond to changing economic conditions. Again, these are not theoretical ideas or academic speculation. We saw this happen with cotton in the 1950's and 1960's, with rice, and we see it still in tobacco. Moreover, with controls based on acreage, we see perverse incentives to intensify production practices to obtain more output per acre. The peanut and tobacco programs before poundage controls showed this clearly.

In short, mandatory production controls can support prices, but they increase farmers' costs and reduce their market. It's no accident that farmers themselves rejected the mandatory control approach for wheat by referendum in 1963, and that we have abandoned their approach for cotton and rice.

Finally, consider the regulatory effort that mandatory production controls require. The Government must decide:

1. How much total output is wanted each year?
2. Who is permitted to produce?
3. How much is each individual who is permitted to produce, allowed to produce in a given year:
    a. Based on historical output? If so which years?
    b. What exceptions because of unusual history (e.g., illness)?

c. Does a farmer who produces less lose allotments? If so, how is this determined, and with what exceptions?

4. What uses are permitted for for idled land? And must certain lands, for example, the most erodible lands, be idled, no matter what the farmer desires?

5. How is the Government going to monitor compliance, and with what penalties (and exceptions) for noncompliance?

6. How are new producers or new producing areas to be handled?

7. Will allotments or rights to produce be transferable from one farm to another? Will nonfarmers be permitted to own allotments (as in tobacco)?

These are all tough decisions, and have created problems in the past control programs. They are serious enough with voluntary acreage controls. With mandatory controls they become intolerable. We will have the key production decisions for agriculture made not by the farmers themselves but by an army of hundreds of Government officials. Transactions which ordinarily would make good business sense, and be desirable for all parties concerned, will become illegal (as happened with the transfer of cotton allotments to west Texas in the 1950's). Because of the bureaucratic powers conferred, mandatory controls should not be considered at all, but if we're going to consider them, it might as well be in 1984.

In sum, whether we look at our interests as farmers, consumers, taxpayers, or citizens of a free country, mandatory controls on agricultural production are a proven loser.

APPENDIX

MAJOR FARM AND FOOD LEGISLATION EXPIRING IN 1985, AND SUSPENDED LEGISLATION AGAIN BECOMING EFFECTIVE

The Agriculture and Food Act of 1981 (Public Law 97-98, 95 Stat. 1231, approved December 22, 1981) which amends statutory provisions of the Agricultural Adjustment Act of 1938, as amended, and the Agricultural Act of 1949, as amended, as well as various other provisions of law generally expires at the end of the 1985 crop year. If it is not extended, and if new legislation covering this area is not enacted by the Congress, certain authorized programs would expire, while others would continue with changes in accordance with the "permanent" legislation which has been suspended since 1970. This summary identifies provisions of the 1981 act and related statutes which expire in 1985 and suspended legislation which will once again become effective.

A. General Summary

The commodity provisions of the Agriculture and Food Act of 1981 are applicable to the 1982-85 crop years. For the most part, the commodity provisions of this act amend sections of the Agricultural Adjustment Act of 1938, as amended, and the Agricultural Act of 1949, as amended, relating primarily to production adjustment, price support payments, and Commodity Credit Corporation [CCC] sales policy.

The 1981 act provides authority for the Secretary to support the prices of milk, wheat, feed grains, upland cotton, rice, soybeans, peanuts, and sugar. The act also authorizes acreage reduction, set-aside, and paid diversion programs for wheat and feed grains and acreage reduction and paid diversion programs for upland cotton and rice. Authority for established or "target price" payments, with specific minimum "target prices" established in the law, is continued. The 1981 act continued the limitation on the total amount of payments (excluding certain payments) that a person is entitled to receive annually under one or more of the programs for wheat, feed grains, upland cotton, and rice, and the act mandated reserve programs for wheat and feed grains.

The 1981 act also amended or extended sections of the National Wool Act of 1954, the Agricultural Trade Development and Assistance Act of 1954 (Public Law 480), various agricultural research,

extension, and teaching authorities, and the Food Stamp Act of 1977.

If no legislation is enacted in 1985 to extend these provisions, some program authorities will revert to existing permanent legislation while others will expire, as shown in the listing that follows:

Program authorities reverting to existing permanent legislation

Wheat
Feed Grains
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Agricultural Research Programs
Extension Programs
Aquaculture Research
Aquaculture Advisory Board
Rangeland Research
Rangeland Research Advisory Board

B. Commodity Programs

DAIRY

Milk price support program

Section 201(d) of the Agricultural Act of 1949 (7 U.S.C. 1446(d)), as added by section 101 of the Omnibus Budget Reconciliation Act of 1982 (Public Law 97-253, 96 Stat. 763, approved September 8, 1982) and amended by section 102 of the Dairy Production Stabilization Act of 1983 (Public Law 98-180, 97 Stat. 1128, approved November 29, 1983), provides for price support for milk through Commodity Credit Corporation purchases of dairy products at a rate equivalent to $12.60 per hundredweight for the period beginning December 1, 1983 and ending on September 30, 1985. On April 1, 1985, the Secretary is authorized to reduce the price support level by 50 cents (to $12.10 per hundredweight) if at that time Commodity Credit Corporation purchases of surplus dairy products during the following 12 months are estimated to exceed 6 billion pounds milk equivalent. On July 1, 1985, the Secretary is authorized (1) to reduce the price support level by 50 cents (to $11.60 per hundredweight) if at that time Commodity Credit Corporation purchases of

surplus dairy products during the following 12 months are estimated to exceed 5 billion pounds milk equivalent or (2) to increase the price support level by at least 50 cents if such purchases are estimated to be 5 billion pounds milk equivalent or less.

In addition, effective for the period beginning on December 1, 1983 and ending on March 31, 1985, the Secretary is required to provide for a reduction of 50 cents per hundredweight from the price of all milk produced in the United States and marketed for commercial use, to be collected and remitted by handlers to the Commodity Credit Corporation for use in defraying the cost of the paid diversion program for milk. Section 201(d) also establishes, effective for the 15-month period beginning on January 1, 1984, a paid diversion program under which milk producers would receive diversion payments of $10 per hundredweight for reduced milk production. Under the paid diversion provisions, producers could receive payments for reducing their production by between 5 and 30 percent below a base level which would be based on the producer's 1982 milk production, or at the producer's option, the average production during 1981 and 1982. The provisions of section 201(d) will expire on September 30, 1985.

After September 30, 1985, the price support program for milk will again be governed by the provisions of section 201(c) of the Agricultural Act of 1949 (7 U.S.C. 1446(c)). Under this provision, price support for milk is mandatory at a level between 75 and 90 percent of parity as the Secretary determines necessary to assure an adequate and wholesome supply of milk.

Milk marketing orders

Section 8c(5)(B) of the Agricultural Marketing Agreement Act of 1937 (7 U.S.C. 608c(5)(B)), as amended by section 101 of the Agriculture and Food Act of 1981, authorizes the inclusion in Federal milk marketing orders of provisions providing for seasonal adjustments in the payments received by producers for milk. The authority for seasonal adjustments in milk marketing orders expires on December 31, 1985. There is no similar legislation which will come into effect thereafter.

Section 8c(17) of the Agricultural Marketing Agreement Act of 1937 (7 U.S.C. 608c(17)), as amended by section 101 of the Agriculture and Food Act of 1981, specifically requires the Secretary of Agriculture to conduct a hearing on a proposed amendment to a marketing order, if the amendment is one that may be legally made to an order, on the written request of one-third or more of the producers under the order. This requirement expires on December 31, 1985. After December 31, 1985, the existing provisions of the act only require that the Secretary conduct a hearing on a proposed amendment to an order if the Secretary determines that the proposed amendment will tend to effectuate the declared policy of the act.

Section 8c(18) of the Agricultural Marketing Agreement Act of 1937 (7 U.S.C. 608c(18), as amended by section 101 of the Agriculture and Food Act of 1981, provides, in connection with prescribing minimum prices under milk marketing orders whenever it is determined that the parity price is not reasonable in view of relevant economic conditions, that the Secretary shall set such prices at

levels which, among other factors, will ensure a sufficient quantity of pure and wholesome milk to meet current needs and to assure a level of farm income adequate to maintain sufficient productive capacity to meet future needs. That portion of this provision requiring the Secretary to specifically consider the impact of the minimum price on current needs and on the maintenance of adequate production capacity to meet future needs expires on December 31, 1985.

Transfer of dairy products to the military and veterans hospitals

Section 202 of the Agriculture Act of 1949, as amended (7 U.S.C. 1446a), which provides for making dairy products available to veterans hospitals and to the military, was extended until December 31, 1985, by section 104 of the Agricultural and Food Act of 1981. There is no other similar legislation which will come into effect thereafter.

Dairy indemnity program

The act of August 13, 1968 (82 Stat. 750, 7 U.S.C. 450j, k, l), as amended, which provides indemnity payments to dairy farmers and manufacturers who sustain losses as a result of pesticides, nuclear radiation or fallout contamination, or residues of chemicals or toxic substances, was extended only through September 30, 1985, by section 105 of the Agriculture and Food Act of 1981. There is no similar legislation which will come into effect thereafter.

WOOL AND MOHAIR PROGRAM

Section 201 of the Agriculture and Food Act of 1981 amends section 703 of the National Wool Act of 1954 (7 U.S.C. 1782) which requires the Secretary of Agriculture to support the prices of wool and mohair to producers by means of loans, purchases, payments, or other operations. This authority is effective only for wool and mohair marketed during the period ending December 31, 1985.

After December 31, 1985, the Secretary of Agriculture would have discretionary authority to support the price of wool and mohair under title III of the Agricultural Act of 1949 (7 U.S.C. 1447 et seq.) through loans, purchases, or other operations. There will be no statutory authority for payments.

WHEAT PROGRAM

Loans, purchases, payments, and acreage reduction

Section 107B of the Agricultural Act of 1949 (7 U.S.C. 1445b–1), as added by section 301 of the Agriculture and Food Act of 1981 and amended by sections 121 and 122 of the Omnibus Budget Reconciliation Act of 1982, provides for price support for the 1982 through 1985 crops of wheat (through loans and purchases) at such level (not less than $3.55 per bushel—$3.65 for the 1983 crop) as the Secretary of Agriculture determines will maintain the competitive relationship of wheat to other grains. The provision also gives the Secretary authority, if the average market price for wheat is not more than 105 percent of the loan level for any marketing year, to reduce the loan and purchase level for the next marketing year.

The act provides for deficiency or "target price" payments (with minimum target price levels specified in the act), acreage reduction, set-aside, and paid diversion authority, and discretionary authority to make disaster payments. All of these provisions are effective only through the 1985 crop of wheat.

Beginning with the 1986 crop, price support on wheat will again be made available under the original version of section 107 (7 U.S.C. 144a note) of the Agricultural Act of 1949. It remained in effect through the 1965 crop and was suspended for the 1966 through 1985 crops by farm bills enacted in 1965, 1968, 1970, 1973, 1977, and 1981. There is no suspended legislation providing for deficiency or disaster payments on wheat which will come into effect again for the 1986 crop.

Processor wheat marketing certificate program

Sections 379d, 379e, 379f, 379g, 379h, 379i, and 379j of the Agricultural Adjustment Act of 1938 (7 U.S.C. 1379d et seq.), dealing with marketing certificate requirements for processors and exporters, were suspended by section 302 of the Agriculture and Food Act of 1981. These sections, which require that persons who engage in the processing of wheat into food products and exporters acquire and surrender domestic marketing certificates, will again become applicable on June 1, 1986.

Suspension of wheat marketing quotas and producer certificate provisions

Sections 331, 332, 333, 334, 335, 336, 338, 339, 379b and 379c of the Agricultural Adjustment Act of 1938 (7 U.S.C. 1331 et seq.), which provides for wheat marketing quotas, acreage allotments, and a producer wheat marketing certificate program, were suspended by section 303 of the Agriculture and Food Act of 1981 through the 1985 crop. Public Law 74, 77th Congress (7 U.S.C. 1330, 1340, 55 Stat. 203, as amended), which contains provisions regarding wheat marketing quotas and penalties, was also suspended through the 1985 crop by section 304 of the 1981 act. These statutory provisions will again become effective with the 1986 crop.

The 1986 and subsequent wheat programs

With the expiration of the statutory authority mentioned above, the 1986 and subsequent wheat program provisions will be as follows:

1. The Secretary must proclaim whether marketing quotas will be in effect for a crop year by not later than April 15 of the previous year (for example, by April 15, 1985, for the 1986 crop).

(a) Quotas would be proclaimed if the Secretary determined that in the absence of quotas, the total supply of wheat in the coming marketing year would be excessive (total supply greater than a normal supply). ("Normal" supply equals estimated domestic consumption for the preceding marketing year plus estimated exports for the year being considered plus a 20-percent allowance for carryover.)

(b) The Secretary shall determine and proclaim the amount of the national marketing quotas for the marketing year not

earlier than January 1 nor later than April 15 of the preceding calendar year.

(c) A national wheat allotment must be announced regardless of whether quotas are proclaimed.

2. If marketing quotas are not proclaimed, program provisions are:

(a) No marketing quotas and no penalties on excess production.

(b) No land-use penalty.

(c) No wheat certificates.

(d) No diversion payments.

(e) Price support through loans or purchases at 75 to 90 percent of parity to producers who comply with their allotments.

3. If marketing quotas are proclaimed, a national referendum of wheat farmers must be held by not later than August 1 of the year prior to the marketing year to which quotas will apply.

4. If marketing quotas are approved by two-thirds or more of the farmers voting in a referendum, program provisions are:

(a) Marketing quotas are in effect.

(b) A land-use penalty for failure to make mandatory diversion is applicable.

(c) A wheat marketing certificate program is in effect with provisions as follows:

(1) Domestic certificates plus loans at not less than 65 or more than 90 percent of parity.

(2) Loans for noncertificate wheat at a level not in excess of 90 percent of parity considering world market prices and feed value relationship to feed grains.

(3) Variable export certificates are required of exporters with net proceeds payable to cooperators.

(4) Processors are required to pay full value of domestic certificates.

(d) No diversion payments.

5. If marketing quotas are disapproved in referendum, program provisions are:

(a) No marketing quotas and no penalties for excess production.

(b) No land-use penalty.

(c) No wheat certificates.

(d) No diversion payments.

(e) Price support through loans and purchases at 50 percent of parity to producers who comply with their allotments.

6. No authority to substitute wheat for feed grains under any of the foregoing alternatives.

FEED GRAIN PROGRAM

Loans, purchases, payments, and acreage reduction

Section 105B of the Agricultural Act of 1949 (7 U.S.C. 1444d), as added by section 401 of the Agriculture and Food Act of 1981 as amended by sections 123 and 124 of the Omnibus Budget Reconciliation Act of 1982, provides for price support for the 1982 through 1985 crops of corn (through loans and purchases) at such level (not less than $2.55 per bushel—$2.65 for the 1983 crop) as the Secre-

tary of Agriculture determines will encourage the exportation of feed grains and not result in excessive stocks. The provision also gives the Secretary authority, if the average market price for corn is not more than 105 percent of the loan level for any marketing year, to reduce the loan and purchase level for the next marketing year. Price support for the 1982 through 1985 crops of grain sorghums, barley, oats, and rye is required at a level that is fair and reasonable in relation to the level for corn. The act provides for deficiency or "target price" payments for corn, grain sorghums, oats, and, if designated by the Secretary, barley (with minimum target price levels for corn specified in the act). Acreage reduction, set-aside, paid diversion, and discretionary disaster payment authority is also provided. All of these provisions are effective only through the 1985 crop of feed grains.

1986 and subsequent feed grain programs

Section 402 of the Agriculture and Food Act of 1981 suspended the applicability of section 105 of the Agricultural Act of 1949 (7 U.S.C. 1444 note) through the 1985 crop. Beginning with the 1986 crop, price support for feed grains will again be made available under the Agricultural Act of 1949. Price support will be made available for corn through loans or purchases at a level not less than 50 percent (65 percent if an acreage diversion program is in effect) or more than 90 percent of parity as the Secretary determines will not result in increasing Commodity Credit Corporation stocks of corn. Other feed grains will be supported at a level which is "fair and reasonable" in relation to the level at which price support is made available for corn.

There is no suspended or other legislation providing for deficiency or "target price" payments, price support payments, a set-aside program, or a land diversion program. No acreage allotments have ever been required by law for any crop of feed grains except corn. In the case of corn, section 330 of the Agricultural Adjustment Act of 1938 (7 U.S.C. 1441 note) provides that acreage allotments shall not be established for the 1959 and subsequent crops of corn.

UPLAND COTTON PROGRAM

Loans, purchases, payments, and acreage reduction

Section 103(g) of the Agricultural Act of 1949 (7 U.S.C. 1444(g)), as added by section 502 of the Agriculture and Food Act of 1981 provides for price support loans, deficiency or "target price" payments, acreage reductions, paid diversions, and discretionary disaster payments for the 1982 through 1985 crops of upland cotton. Section 103(g) is effective only through the 1985 crop.

Beginning with the 1986 crop, price support on upland cotton will again be made available under section 103(a) of the Agricultural Act of 1949 (7 U.S.C. 1444(a)), which was suspended through the 1985 crop by section 504 of the Agriculture and Food Act of 1981.

CCC sales price restrictions for cotton

The changes made in the tenth sentence of section 407 of the Agricultural Act of 1949 (7 U.S.C. 1427) by section 503 of the Agriculture and Food Act of 1981, relating to Commodity Credit Corpora-

tion sales of upland cotton are effective only through July 31, 1986. After that date, sales will be made in accordance with the provisions of section 407 in effect prior to these changes.

Suspension of marketing quotas and acreage allotments

Sections 342, 343, 344, 345, 346, and 377 of the Agricultural Adjustment Act of 1938 (7 U.S.C. 1342 et seq.), relating to base acreage allotments, marketing quotas, and related provisions, were suspended by section 501 of the Agriculture and Food Act of 1981 through the 1985 crop of upland cotton. These sections will again become applicable for the 1986 crop and subsequent crops.

Price support on cottonseed and soybeans

Section 203 of the Agricultural Act of 1949 (7 U.S.C. 1446d), providing for price support on cottonseed or soybeans if the other is supported, was suspended by section 504 of the Agriculture and Food Act of 1981. Section 203 will again become effective as to the 1986 crops.

Skiprow practices

Section 374(a) of the Agricultural Adjustment Act of 1938 (7 U.S.C. 1374(a)) was extended by section 505 of the Agriculture and Food Act of 1981 to provide that the rules governing skiprow patterns which were in effect for the 1971 through 1973 crops shall also apply to the 1974 through 1985 crops. There is no other such legislation which will be effective after the 1985 crop.

Preliminary allotments for 1986 crop of upland cotton

Section 506 of the Agriculture and Food Act of 1981 provides that the permanent State, county, and farm base acreage allotments for the 1977 crop of upland cotton, as adjusted for 1977 underplantings and as reconstituted, shall again become effective as preliminary allotments for the 1986 crop.

1986 and subsequent cotton programs

With the expiration of the statutory provisions mentioned above, the 1986 and subsequent cotton program provisions will be as follows:

1. The Secretary must proclaim a national marketing quota if the Secretary determines that, in the absence of quotas, the total supply would exceed the "normal" supply. ("Normal" supply is estimated domestic consumption plus estimated exports for the year being considered, plus a 30 percent allowance for carryover.)

2. If marketing quotas are not proclaimed, program provisions are:

(a) No marketing quotas and no penalties on excess production.

(b) No diversion or price support payments.

(c) Price support to cooperators at 65 to 90 percent of parity as determined by the Secretary and to noncooperators at not to exceed the rate to cooperators.

3. If marketing quotas are proclaimed and are approved by two-thirds or more of the farmers voting in a referendum, program provisions are:

(a) Marketing quotas and acreage allotments (minimum allotment of 16 million acres).

(b) No diversion or price support payments.

(c) Price support to cooperators at 65 to 90 percent of parity as determined by the Secretary, and to noncooperators at not to exceed the rate to cooperators.

4. If marketing quotas are disapproved in a referendum, program provisions are:

(a) No marketing quotas and no penalties on excess production.

(b) No diversion or price support payments.

(c) Price support through loans or purchases to producers who comply with their allotments at 50 percent of parity and to noncooperators at not to exceed the rate to cooperators.

5. No authority to sell, lease, or transfer cotton allotments.

RICE PROGRAM

Loans, purchases, payments, and acreage reduction

Section 101(i) of the Agricultural Act of 1949 (7 U.S.C. 1441(i)), as added by section 602 of the Agriculture and Food Act of 1981 and amended by section 125 of the Omnibus Budget Reconciliation Act of 1982 (Public Law 97-253; 96 Stat. 771, approved September 8, 1982), provides for price support loans and purchases, deficiency or "target price" payments, acreage reductions, paid diversions, and discretionary disaster payments for the 1982 through 1985 crops of rice. These provisions are effective only through the 1985 crop of rice. Beginning with the 1986 crop, there will be no authority for deficiency or "target price" payments, an acreage reduction or land diversion program, or disaster payments.

1986 and subsequent rice program

Beginning with the 1986 crop, price support for rice would be governed by the provisions of section 101 (a) and (d) of the Agricultural Act of 1949 (7 U.S.C. 1441 (a) and (d)). Those provisions provide for price support to be made available to cooperators through loans and purchases at not less than 65 percent nor more than 90 percent of parity. Price support may be made available to noncooperators at a level not in excess of the level of support available to cooperators.

Section 601 of the Agriculture and Food Act of 1981 repealed sections 352, 353, 354, 355, and 356 of the Agricultural Adjustment Act of 1938 relating to acreage allotments and marketing quotas for rice effective beginning with the 1982 crop. Therefore, there is no authority for acreage allotments or marketing quotas for rice.

PEANUT PROGRAM

Suspension of marketing quotas and acreage allotments

Section 701 of the Agriculture and Food Act of 1981 suspended, for the 1981 through 1985 crops of peanuts, the provisions of sections 358(a)-(j), 358a(a)-(h), 359 (a), (b), (d), and (e), and 371, and part I of subtitle C of title III of the Agricultural Adjustment Act of 1938 (7 U.S.C. 1358, 1358a, 1359, 1361-1368, and 1371) relating to

acreage allotments and marketing quotas for peanuts. These provisions will become effective again with the 1986 crop.

National poundage quota and farm poundage quota

Sections 358 (k) through (p) of the Agricultural Adjustment Act of 1938 (7 U.S.C. 1358 (k)–(p)), as added by section 702 of the Agriculture and Food Act of 1981, establishes a national poundage quota for peanuts for each of the 1982 through 1985 marketing years, provides for allocation of the quota among the States, provides for establishment of farm poundage quotas, provides for the conduct of a referendum to determine if peanut producers favor poundage quotas, and contains definitions of terms. These provisions are effective only through the 1985 crop.

Sale, lease, or transfer of farm poundage quota

Sections 358a (i) and (j) of the Agricultural Adjustment Act of 1938 (7 U.S.C. 1358a (i) and (j)), as added by section 703 of the Agriculture and Food Act of 1981, permit the sale, lease, or transfer of peanut farm poundage quotas within a State if the State's poundage quota is less than 10,000 tons for the 1981 crop and permit an operator of a farm to transfer the operator's quota to another farm controlled by the operator in the same county or a contiguous county in the same State. These provisions are effective only through the 1985 crop.

Marketing penalties, disposition of additional peanuts

Sections 359 (f) through (l) of the Agricultural Adjustment Act of 1938 (7 U.S.C. 1359 (f)–(l)), as added by section 704 of the Agriculture and Food Act of 1981, provides a penalty for marketing peanuts for domestic edible use in excess of the farm poundage quota at a rate of 140 percent of the loan level for quota peanuts, authorizes additional peanuts to be purchased solely for the purpose of crushing or export, provides a penalty of 120 percent of the quota loan level for handlers failing to comply with regulations relating to the disposition and handling of additional peanuts, and specifies the prices at which additional peanuts owned by the Commodity Credit Corporation may be sold. These provisions are effective only through the 1985 crop.

Price support program

Section 108A of the Agriculture Act of 1949 (7 U.S.C. 1445c–l), as added by section 705 of the Agriculture and Food Act of 1981, requires the Secretary to make price support available to producers of peanuts for the 1982 through 1985 crops. The provision provides a two-tier price support system for quotas and additional peanuts. In the case of quota peanuts, the level of support for the 1982 crop is the national average cost of production but not less than 27.5 cents per pound. The level of support for 1983–85 crop quota peanuts is determined based upon the quota support level for the previous crop adjusted to reflect any increase in the national average cost of production but not less than 27.5 cents per pound, except that the support rate cannot be increased by more than 6 percent annually. The level of support for additional peanuts is to be determined by the Secretary, taking into consideration certain factors,

but sufficient to ensure there are no Commodity Credit Corporation losses. Warehouse storage loans to designated area marketing associations are also authorized, and associations are required to maintain pool records by type for quota and additional peanuts and to offset pool losses against pool gains. These provisions are effective only through the 1985 crop.

Section 707 of the Agriculture and Food Act of 1981 suspended, for the 1982 through 1985 crops, the application of section 101 of the Agricultural Act of 1949 (7 U.S.C. 1441) relating to price support for peanuts. Beginning with the 1986 crop, the price-support provisions of section 101 will again apply.

Reports and records

Section 373(a) of the Agricultural Adjustment Act of 1938 (7 U.S.C. 1373(a)) was modified by section 706 of the Agriculture and Food Act of 1981 to make certain report and recordkeeping requirements applicable to all farmers engaged in the production of peanuts. This provision is effective only through the 1985 crop.

1986 and subsequent peanut programs

With the expiration of the statutory authority mentioned above, the 1986 and subsequent peanut program provisions will be as follows:

1. Between July 1 and December 1 of each calendar year the Secretary shall proclaim the amount of the national marketing quota for peanuts for the crop produced in the next succeeding calendar year.

   (a) The national marketing quota for peanuts will be converted to a national acreage allotment of not less than 1,610,000 acres.

   (b) The Secretary will provide for an apportionment of the national acreage allotment to the States, and in turn an apportionment of the State acreage allotments to the counties and to individual farms.

2. A national referendum of peanut farmers must be held regarding the marketing quotas by no later than December 15 of the calendar year prior to the year or years in which the quotas will apply.

3. If marketing quotas are approved by two-thirds or more of the farmers voting in the referendum, program provisions are:

   (a) Marketing quotas are in effect for the subsequent 3 calendar years.

   (b) A marketing penalty is in effect for marketing peanuts in excess of the marketing quota or marketing peanuts from any farm for which no acreage allotment was determined. The Secretary may require collection of penalties for peanuts marketed in excess of the acreage allotment.

   (c) Price support through loans or purchases is available at not less than 75 percent of parity nor more than 90 percent of parity.

4. If marketing quotas are disapproved in the referendum, program provisions are:

   (a) No marketing quotas.

   (b) No marketing quota penalties.

(c) Price support through loans or purchases is available at 50 percent of parity.

SOYBEAN PRICE SUPPORT

Section 201 of the Agricultural Act of 1949 (7 U.S.C. 1446), as amended by section 801 of the Agriculture and Food Act of 1981, requires the Secretary of Agriculture to establish a price support loan and purchase program for the 1982 through 1985 crops of soybeans. The support level would be equal to 75 percent of the average price of soybeans received by farmers over the preceding 5 marketing years, with the high and low years excluded, but not less than $5.02 per bushel. Soybean acreage reductions cannot be required as a condition of eligibility for price support, and soybeans are not eligible for any reserve program. These provisions are effective only through the 1985 crop.

Beginning with the 1986 crop, the Secretary is not required to make price support available for soybeans. However, the Secretary would have discretionary authority to make price support available under title III of the Agricultural Act of 1949 (7 U.S.C. 1447 et seq.) through loans, purchases, or other operations at a level not in excess of 90 percent of parity.

SUGAR PRICE SUPPORT

Section 201 of the Agricultural Act of 1949 (7 U.S.C. 1446), as amended by section 901 of the Agriculture and Food Act of 1981, requires the Secretary of Agriculture to support the price of the 1982 through 1985 crops of sugarcane and sugar beets. A purchase program was mandated for domestically grown sugar processed between December 22, 1981 and March 31, 1982. Effective October 1, 1982, domestically grown sugarcane and sugar beets must be supported through a loan program. These provisions are effective only through the 1985 crop.

Beginning with the 1986 crop, the Secretary is not required to make price support available for sugarcane and sugar beets. However, the Secretary would have discretionary authority to make price support available under title III of the Agricultural Act of 1949 (7 U.S.C. 1447 et seq.) through loans, purchases, or other operations at a level not in excess of 90 percent of parity.

C. Other Legislation

NATIONAL AGRICULTURAL COST OF PRODUCTION STANDARDS REVIEW BOARD

Sections 1005–1014 of the Agriculture and Food Act of 1981 (7 U.S.C. 4101–4110) establish an 11-member board to be appointed by the Secretary of Agriculture for the purpose of meeting twice annually to review the cost of production methodology used by the Department of Agriculture in price support programs. The board will also review the adequacy of the parity formula, make recommendations to the Secretary, and submit annual reports to Congress. The board will cease to exist on September 30, 1985.

MISCELLANEOUS

Payment limitation for wheat, feed grains, upland cotton, and rice

Section 1101 of the Agriculture and Food Act of 1981 (7 U.S.C. 1308) provides that the total amount of payments (excluding disaster payments) that a person is entitled to receive under one or more of the annual programs established under the Agricultural Act of 1949 for wheat, feed grains, upland cotton, extra long staple cotton, and rice, is $50,000 for each of the 1982 through 1985 crops. Section 1101 of the 1981 act further provides that for the 1982 through 1985 crops, the total amount of disaster payments that a person is entitled to receive under one or more of the annual programs for wheat, feed grains, upland cotton, and rice is $100,000. There is no similar legislation that will come into effect after the 1985 crops.

CCC sales price restrictions for wheat and feed grains

Section 407 of the Agricultural Act of 1949, as amended (7 U.S.C. 1427), was modified by section 1103 of the Agriculture and Food Act of 1981 effective for the 1982 through 1985 crops of wheat and feed grains, to prohibit sales of Commodity Credit Corporation stocks of wheat, corn, grain sorghum, barley, oats, and rye at less than 115 percent of the national average loan rate for the commodity, adjusted for market differentials and reasonable carrying charges.

Effective for the 1986 and subsequent crops, if a voluntary adjustment program is in effect for the commodity and CCC estimates that year-end carryover stocks of the commodity will be less than 25 percent (35 percent in the case of wheat) of estimated domestic and export consumption, CCC would be prohibited from selling stocks of the commodity for unrestricted use at less than 115 percent of the current price support loan plus reasonable carrying charges (120 percent in the case of wheat when the carryover stocks are estimated to be less than 25 percent).

The modification to section 407 also provides, for the 1982 through the 1985 crops, that CCC's commodity purchase price for offsetting purchases shall not exceed the minimum resale price for the commodities for unrestricted use. Effective for the 1986 and subsequent marketing years the CCC purchase price would not be permitted to exceed the then current support price for the commodities involved.

Application of terms in the Agricultural Act of 1949

Section 408(k) of the Agricultural Act of 1949 (7 U.S.C. 1428), as added by the Agricultural Act of 1970 and amended by section 1104 of the Agriculture and Food Act of 1981, which makes certain specified terms in sections 401(a), 402, 403, 406, 407, and 416 of the Agricultural Act of 1949, as amended, applicable to price support loan and purchase operations with respect to wheat and feed grains, is effective only through the 1985 crop.

Supplemental set-aside and acreage limitation authority

Section 113 of the Agricultural Act of 1949 (7 U.S.C. 1445h), as added by the Agricultural Act of 1980 and amended by section 1105

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of the Agriculture and Food Act of 1981, provides that, effective only for the 1982 through 1985 crops of wheat and feed grains, the Secretary of Agriculture is authorized to announce and provide for either set-aside or acreage limitation provisions for such crops, notwithstanding any other provision of law or announcement by the Secretary to the contrary, if the Secretary determines the action to be necessary because of the imposition of export restrictions for such crops by the President or other member of the executive branch of Government. No similar authority exists for the 1986 and subsequent crops of wheat and feed grains.

Provisions related to normally planted acreage and target prices

Section 1001 of the Food and Agricultural Act of 1977 (7 U.S.C. 1309), as amended by section 1106 of the Agriculture and Food Act of 1981, provides that, effective only for the 1982 through 1985 crops of wheat and feed grains, whenever a set-aside program is in effect the Secretary of Agriculture may require as a condition of eligibility for loans, purchases, and payments that the producers not exceed the acreage on the farm normally planted to crops designated by the Secretary, adjusted as necessary and reduced by the set-aside or diverted acreage. If this option is used, the Secretary may increase deficiency payments by an amount determined appropriate to compensate producers, or if no payments are being made the Secretary may provide for special payments. No similar authority pertaining to normal crop acreage exists for the 1986 and subsequent crops of wheat and feed grains.

Normal supply

Section 1107 of the Agriculture and Food Act of 1981 (7 U.S.C. 1310a) provides that if the Secretary of Agriculture determines that the supply of wheat, corn, upland cotton, or rice during the marketing year applicable to each of the 1982 through 1985 crops is not likely to be excessive and production control provisions are not necessary, then the total supply of the commodity will be deemed not to exceed normal supply. The Secretary may not make any determination to the contrary for the marketing year in question. No similar authority pertaining to normal supply exists for the 1986 and subsequent crops.

Special grazing and hay program

Section 109 of the Agricultural Act of 1949 (7 U.S.C. 1445d), as added by the Food and Agriculture Act of 1977 and amended by section 1110 of the Agriculture and Food Act of 1981, authorizes the Secretary to administer a special wheat acreage grazing and hay program by making payments to participating producers who plant wheat for grazing purposes or hay on a specified portion of their acreage on the farm originally intended to be planted to wheat, feed grains, or upland cotton for harvest. The provisions of this section are effective only for the 1982 through 1985 crops. No similar authority exists for the 1986 and subsequent crops.

AGRICULTURAL EXPORT CREDIT REVOLVING FUND

Section 1201 of the Agriculture and Food Act of 1981 (7 U.S.C. 1707a) established in the U.S. Treasury an export credit revolving fund for use by the Commodity Credit Corporation without fiscal year limitation. The revolving fund would be used to finance the export sales of U.S. agricultural commodities—including sales of breeding animals—from both private and CCC stocks, and for the establishment of expanded facilities, to be financed from the local currency proceeds from sales of the commodities in the foreign country, to allow for expanded imports of U.S. agricultural commodities. The fund can only be used in cases where there is a substantial potential for developing or enhancing regular commercial markets for U.S. agricultural commodities. An annual report to Congress is required to be submitted on December 1 of each year describing the activities carried out under this provision. The revolving fund is abolished on October 1, 1985.

PUBLIC LAW 480

Section 409 of the Agricultural Trade Development and Assistance Act of 1954 (7 U.S.C. 1736c), commonly known as Public Law 480, as amended by section 1216 of the Agriculture and Food Act of 1981, provides that no agreements to finance sales under title I of Public Law 480 and no programs of assistance under title II of Public Law 480 shall be entered into after December 31, 1985.

THE FOOD STAMP ACT OF 1977

Section 18(a) of the Food Stamp Act of 1977, as amended (7 U.S.C. 2027(a)), authorizes appropriations by Congress through fiscal year 1985 for the purpose of carrying out the provisions of the food stamp program. Unless extended, the authorization for the food stamp program will expire on September 30, 1985. The food stamp program provides nutritional assistance to households determined to be in need based upon a formula which takes into account income, resources, the size of the household, and other relevant criteria. Such assistance is provided by giving each eligible household the requisite dollar value of food stamps on a monthly basis, which stamps may be exchanged at authorized retail outlets for eligible commodities. Section 4(b) of the Food Stamp Act of 1977 (7 U.S.C. 2013(b)) prohibits the donation of federally donated food in jurisdictions where the food stamp program is in operation except on a temporary basis under programs authorized to meet disaster relief needs, for purposes of the commodity supplemental food program, and on Indian reservations. If the food stamp program were no longer in operation, section 4(b) would no longer act as a bar to distribution of commodities.

COMMODITY DISTRIBUTION PROGRAMS

Section 4 of the Agriculture and Consumer Protection Act of 1973 (7 U.S.C. 612c note), as amended by section 1304(a) of the Food and Agriculture Act of 1977 and extended by section 1334(1) of the Agriculture and Food Act of 1981, authorizes the Secretary of Agriculture through September 30, 1985, to purchase and distribute ag-

ricultural commodities with funds appropriated from the general fund of the Treasury for, but not limited to, distribution to institutions, supplemental feeding programs, disaster areas, summer camps for children, the U.S. Trust Territory of the Pacific Islands, and Indians.

COMMODITY SUPPLEMENTAL FOOD PROGRAM—ADMINISTRATIVE COSTS

Section 5(a) of the Agriculture and Consumer Protection Act of 1973 (7 U.S.C. 612c note), as added by section 1304(b) of the Food and Agriculture Act of 1977 and amended by section 1335 of the Agriculture and Food Act of 1981 and section 209 of Public Law 98–8, as amended by section 2(8) of Public Law 98–92, provides that in carrying out the commodity supplemental food program the Secretary shall provide funds to States in amounts equal to the administrative costs incurred by State and local agencies in operating the program, but in no event more than 15 percent of the sum of (1) the amount appropriated to provide commodities to State agencies under the program and (2) the value of the additional commodities donated by the Secretary for use in the food packages distributed to program participants. The authority to pay State administrative costs under this program expires on September 30, 1985.

RESEARCH, EXTENSION, AND TEACHING PROVISIONS

Joint Council on Food and Agricultural Sciences

Section 1407 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3122), as amended by section 1407 of the Agriculture and Food Act of 1981, establishes within the Department of Agriculture a committee known as the Joint Council on Food and Agricultural Sciences. Minimum membership of the Joint Council is set at 25 representatives of organizations and agencies which conduct or assist conducting research, extension, or teaching in the food and agricultural sciences. The Joint Council holds public meetings. The primary responsibility of the Joint Council is to bring about more effective research, extension, and teaching in the food and agricultural sciences in the United States through improved planning and coordination of public and private activities. The term of the Joint Council expires on September 30, 1985.

National Agricultural Research and Extension Users Advisory Board

Section 1408 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3123), as amended by section 1408 of the Agriculture and Food Act of 1981, establishes within the Department of Agriculture a 25-member advisory board known as the National Agricultural Research and Extension Users Advisory Board. Board membership is broadly representative of agriculture and related areas of interest, including producers, consumers, suppliers, marketing, environmental, rural development, nutrition, animal health, transportation, and labor. The board is required to meet at least three times annually and is generally responsible for preparing independent advisory opinions pertaining

to the food and agricultural sciences. The term of the board expires on September 30, 1985.

Competitive, special, and facilities research grants

The authorization for appropriations for the Secretary to award competitive research grants for up to 5 years in duration to promote food and agricultural research under section 2(b) of the act of August 4, 1965 (7 U.S.C. 450i) was extended by section 1415 of the Agriculture and Food Act of 1981 through September 30, 1985.

Research facilities program

The authorization for appropriations awarding Federal grants to help finance physical facilities required to carry out an effective program of agricultural research at eligible institutions under the Research Facilities Act of 1963 (7 U.S.C. 390 et seq.) was extended by section 1416 of the Agriculture and Food Act of 1981 through September 30, 1985.

Federal support of higher education in the food and agricultural sciences

The authorization for appropriations for the Secretary to make competitive grants to develop and administer programs to meet unique food and agricultural problems, to attract students for higher education programs, and to conduct fellowship programs to meet regional and national objectives in the food and agricultural sciences under section 1417 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3152) was extended by section 1418 of the Agriculture and Food Act of 1981 through September 30, 1985.

Grants for research pertaining to alcohol and industrial hydrocarbons

The authorization for appropriations for the Secretary to make grants to colleges, universities, government corporations, and Federal laboratories for the purpose of conducting research related to the production of alcohol and industrial hydrocarbons from agricultural commodities and forest products under section 1419 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3154) was extended by section 1422 of the Agriculture and Food Act of 1981 through September 30, 1985.

Animal Health Science Research Advisory Board

Section 1432 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3194), as amended by section 1428 of the Agriculture and Food Act of 1981, establishes in the Department of Agriculture an 11-member board known as the Animal Health Sciences Research Advisory Board. The board is required to meet at least annually to consult with and advise the Secretary on matters pertaining to animal health and disease research and to recommend priorities for such research programs. The term of the board expires on September 30, 1985.

Animal health and disease research programs at eligible institutions

The authorization for appropriations for the Secretary to support continuing animal health and disease research at eligible institutions under section 1433 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3195) was extended by section 1429 of the Agriculture and Food Act of 1981 through September 30, 1985. The funds provided under this provision may be used to help meet the expenses of publishing and disseminating the results of such research, for administrative planning and direction, and for the purchase of necessary equipment and supplies.

Appropriations for research on national or regional animal health or disease problems

The authorization for appropriations for the Secretary to support research on specific national or regional animal health or disease problems through grants to eligible institutions for periods of up to 5 years under section 1434 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3196) was extended by section 1430 of the Agriculture and Food Act of 1981 through September 30, 1985.

Extension at 1890 land-grant colleges, including Tuskegee Institute

Section 1444 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3221), as amended by section 1431 of the Agriculture and Food Act of 1981, authorizes annual appropriations through September 30, 1985, for the Secretary to support continuing agricultural and forestry extension at colleges eligible to receive funds under the act of August 30, 1890, including Tuskegee Institute. This section also requires that the level of appropriations, for each of the fiscal years 1983 through 1985, must be not less than 6 percent of the total funds appropriated each year under the Act of May 8, 1914 (7 U.S.C. 341, et seq.).

Dairy goat research at 1890 land-grant colleges, including Tuskegee Institute

The authorization for appropriations in an amount equal to 1 percent of the total amount appropriated under section 1445 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3222), for the Secretary to make a grant to one eligible 1890 land-grant college to support dairy goat research as provided in section 1432(b) of the Agriculture and Food Act of 1981 (7 U.S.C. 3222 note), expires on September 30, 1985.

Solar energy model farms and demonstration projects

The authorization for appropriations for the Secretary to distribute up to $20 million to eligible institutions for use in establishing model farms and solar energy demonstration projects under sections 1452 through 1454 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3261–3263) was extended by section 1434 of the Agriculture and Food Act of 1981 through September 30, 1985.

Authorization for existing and certain new agricultural research programs

Section 1463(a) of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3311(a)), as extended by section 1437 of the Agriculture and Food Act of 1981, provides the general authorization for appropriations for agricultural research activities carried out under the National Agricultural Research, Extension, and Teaching Policy Act of 1977 and other acts (except for solar energy research and development; research facilities; grants and fellowships for food and agricultural science education; grants for research, including pilot projects, on the production and marketing of alcohol and industrial hydrocarbons from agricultural commodities and forest products; and competitive grants for agricultural research). This authorization for appropriations expires on September 30, 1985.

Section 1463(b) of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3311(b)), as extended by section 1437 of the Agriculture and Food Act of 1981, provides the authorization for appropriations for the purpose of funding agricultural research at State agricultural experiment stations under the act of March 2, 1887. This authorization for appropriations expires on September 30, 1985.

Authorization for extension programs

Section 1464 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3312), as extended by section 1438 of the Agriculture and Food Act of 1981, which provides the authorization for appropriations for the purpose of carrying out Department of Agriculture extension programs expires on September 30, 1985.

Aquaculture research

The authorization for appropriations for the Secretary to promote research and extension activities at eligible institutions pertaining to the development of aquaculture production and facilities under sections 1474 through 1477 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3321–3324), as added by section 1440(a) of the Agriculture and Food Act of 1981, expires on September 30, 1985.

Rangeland research

The authorization for appropriations for the Secretary to develop and implement a cooperative rangeland research program in coordination with existing programs for the purpose of improving the production and quality of desirable native forages or introduced forages for livestock and wildlife under sections 1478 through 1483 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3331–3336), as added by section 1440(a) of the Agriculture and Food Act of 1981, expires on September 30, 1985.

GLOSSARY OF TERMS RELATING TO DOMESTIC FARM PRICE AND INCOME SUPPORT PROGRAMS

Acreage reduction program (ARP) or acreage limitation.—New in the 1981 farm bill, if imposed by the Secretary of Agriculture this program requires participating farmers to limit the acreage of a crop to a specified portion of their base acreage of that crop in order to qualify for program benefits. Generally, the producer must also divert the remaining acreage from production of that crop to some conserving use. This program is applicable to wheat, feed grains, upland cotton, extra long staple cotton, and rice.

Agricultural Stabilization and Conservation Service (ASCS).—An agency of the Department of Agriculture responsible for administering farm price and income support programs as well as some conservation and forestry cost sharing programs. A local office is maintained in nearly all farming countries. It is at these county offices where a farmer signs up to participate in Federal farm programs.

Allotment or acreage allotment.—The individual farm's share, based on its previous production, of the national acreage needed to produce sufficient supplies of a particular crop. Allotments currently apply only to peanuts and tobacco.

Base acreage.—The amount of acreage of a crop on a farm used as a basis for making acreage reductions. Each participating farm will have a base acreage for the crop established by ASCS based on the actual planted acreage of the crop on the farm in the previous year or the average of the two previous years. It may be adjusted for disasters, crop rotations, and other factors as necessary to make it fair and equitable.

Carryover.—The supplies or volume of a farm commodity not yet used at the end of a marketing year. It is the remaining stock carried over into the next year. Marketing years generally start at the beginning of the new harvest for a commodity and extend to the same time in the following year.

Commodity Credit Corporation (CCC).—A Government-owned and operated corporation authorized to borrow funds from the Treasury as needed to operate the U.S. Department of Agriculture's commodity price and income support programs, to manage Government-owned commodities, and to administer their disposal through domestic and export programs. The CCC has authority to borrow up to $25 billion to carry out its responsibilities. Net losses on financial operations are periodically reimbursed by funds appropriated by Congress. The CCC has no operating personnel. Its various activities are carried out primarily through ASCS personnel, although certain programs are administered and implemented

through the Agricultural Marketing Service, the Foreign Agricultural Service, and the Food and Nutrition Service.

Conservation use or conserving use.—An approved use of diverted land that protects it from weeds, wind, and water erosion, such as planting to grasses, legumes, and small grain which is not allowed to mature. If the Secretary of Agriculture permits, the land may be used for grazing or for production of certain crops. Under certain circumstances specified by the Secretary, the land may be used for wildlife food plots or wildlife habitats and the owner may receive payment from the Secretary of an appropriate share of the cost of the wildlife practices.

Cost-of-production.—The average amount in dollars per unit to grow or raise a farm product, including all purchased inputs and sometimes including allowances for management and the use of owned land. May be expressed on a unit, a per-acre, or a per-bushel basis for all farms in an area or in the whole country.

Cover crop.—A close-growing crop, grown primarily to protect and improve soil between periods of regular crops, or between trees and vines in orchards and vineyards.

Cross-compliance.—The requirement that if a farmer wishes to participate in a commodity program for one crop by meeting the qualifications for price supports and loans for that program, he must also meet the program provisions for other major program crops which he grows. See *Off-setting compliance.*

Deficiency payments.—Federal funds paid to farmers when farm prices are below the target price. The payment rate is determined by subtracting from the target price the higher of (1) the loan rate, or (2) the national average market price of a commodity during the first 5 months of the marketing year (calendar year price for cotton). Generally, the amount of payment the Federal Government makes to a farmer who qualifies (by meeting all farm program conditions) is determined by multiplying this difference (payment rate) by the farmer's program acreage of the particular crop by the farmer's program yield. See *Target prices.*

Disaster payments.—Federal funds provided to farmers participating in the feed grains, wheat, rice, or upland cotton programs when either: (1) planting is prevented, or (2) crop yields are abnormally low because of adverse weather and related conditions. Under the 1981 farm bill, the Secretary of Agriculture is required to make such payments in areas where Federal crop insurance is unavailable. The Secretary may make such payments when Federal crop insurance is inadequate or when he determines that such payments are necessary to avert an economic emergency.

Farmer-owned reserve (FOR) or farmer-held reserve.—A program of long-term CCC loans for wheat and feed grains, intended to buffer sharp price movements and to hold reserves for times of production shortfall. Under the program, farmers who place their grain in storage receive an extended nonrecourse loan for 3 to 5 years. In addition, interest on the loan may be waived and farmers may receive annual storage payments from the Government. The farmer cannot take his grain out of storage without penalty until the market price reaches a specific "release price." Once this is reached, the farmer may elect to remove his grain from the reserve but is not required to do so. In an emergency, USDA can require

repayment of the loans. The program was established in the 1977 farm bill and extended with modifications in 1981.

Feed grains.—Any of several grains, most commonly used for livestock or poultry feed, such as corn, grain sorghum, oats, and barley.

Food grains.—Cereal seeds most commonly used for human food, chiefly wheat and rice.

Loan rate.—The price per unit (bushel, bale, pound) at which the Government will provide loans to farmers to enable them to hold their crops for later sale. See *Nonrecourse loans.*

Marketing orders and agreements (Federal).—Regulatory structures which permit agricultural producers collectively to improve orderly marketing of a crop or commodity. A marketing order is a regulation requested by producers and issued by the Secretary of Agriculture for a particular commodity. To become effective, an order must be approved by a requisite number of producers—usually two-thirds—of the regulated commodity. A marketing order provides the means for producers of a commodity to act in concert to establish and maintain orderly marketing conditions for the commodity through the imposition of regulatory restrictions binding on all handlers of the commodity in the area of regulation. Specific restrictions vary among orders but may include packing standards, minimum requirements for grade, size, and price, and limitations on quantities shipped or marketed. Marketing agreements are usually issued in conjunction with orders and in such cases serve as a means for handlers to signify their approval of the regulations. Issuance of the agreement requires the signatures of handlers of at least 50 percent of the commodity covered. When both an order and an agreement are issued their regulatory terms are identical. Marketing agreements may also be issued without orders. In this case, the statutory guidelines for agreements are much less restrictive than for orders, however, an agreement is enforceable only with respect to those producers or handlers who voluntarily enter into the agreement with the Secretary of Agriculture.

Marketing quota.—That quantity of a crop that will provide adequate and normal market supplies. This quantity is translated into terms of acreage or individual farm marketing quotas based on a farm's previous production of that commodity. When marketing quotas are in effect (only after approval by two-thirds or more of the eligible producers voting in a referendum), growers who produce in excess of their farm acreage allotments or farm marketing quotas are subject to marketing penalties on the "excess" production and are ineligible for Government price support loans. For certain tobaccos, a poundage limitation is applicable as well as acreage allotments, when approved by grower referendum.

Marketing year.—The 12-month period usually beginning at harvesttime during which production of a particular crop normally moves to market. Marketing or crop years for selected agricultural commodities are as follows: corn, milk, grain sorghum, burley tobacco, soybean meal and oil, October through September; wheat, oats, and barley, June through May; cotton and rice, August through July; soybeans, September through August; and Flue-cured tobacco, July through June.

National farm program acreage.—The number of harvested acres of feed grains, wheat, upland cotton, extra long staple cotton, and rice needed nationally to meet domestic and export use and to accomplish any desired increase or decrease in carryover levels. Program acreage for an individual farm is based on the producer's share of the national farm program acreage.

Nonrecourse loans.—Price support loans to farmers to enable them to hold their crops for later sale. The loans are nonrecourse because if a farmer cannot profitably sell the commodity and repay the loan with interest when it matures, the pledged or mortgaged collateral (the commodity on which the loan was advanced) can be delivered to the Government in full settlement of the loan. Farmers may redeem their commodities by paying off the loans with interest. See *Loan rate.*

Normal crop acreage.—The acreage on a farm normally devoted to a group of designated crops. When a set-aside program is in effect for wheat or feed grains the Secretary of Agriculture may require that a farm's total planted acreage of such designated crops plus set-aside acreage not exceed the normal crop acreage if the farmer wants to participate in the commodity loan program or receive deficiency payments.

Off-setting compliance.—The requirement that if a farmer wishes to participate in a program for one farm he must also meet the program provisions for other farms which he owns. See *Cross-compliance.*

Oilseed crops.—Primarily soybeans, peanuts, cottonseed, and flaxseed used for the production of oils for cooking, protein meals, and nonfood uses. Lesser oil crops are sunflower, safflower, castor beans, and sesame.

Paid diversion program.—A program which provides direct payments to farmers in return for diverting a specified amount of acreage of certain crops into conserving use.

Payment limitation.—A limitation set by law on the amount of money any one individual may receive in farm program payments each year under the feed grain, wheat, upland cotton, extra long staple cotton, and rice programs. The limit is $50,000 ($100,000 for disaster payments) under the 1981 farm bill.

Payment-in-kind (PIK).—A program which provides compensation to farmers in the form of commodities for diverting a specified amount of acreage of certain crops into conserving use.

Production control programs.—Any of the various programs intended to limit production of wheat, feed grains, cotton, and rice. These are: Acreage reduction programs, set-asides, paid diversions, acreage allotments, marketing quotas, and PIK.

Program benefits.—Various forms of financial assistance available to those farmers who comply with the requirements of Government farm programs. Benefits include eligibility for CCC loans, deficiency payments, diversion payments (if offered) and disaster payments (under certain circumstances).

Set-aside.—A program under which a wheat or feed grain farmer must divert a proportion of his cropland (normal crop acreage if required by the Secretary of Agriculture) to soil conserving uses in order to be eligible for program benefits including deficiency payments, diversion payments, and loans.

Soil bank.—A program operated during the 1950's to achieve both soil conservation and production control objectives. The program was authorized by the Soil Bank Act of 1956. Producers, during 1956 through 1960, could enter into long-term contracts to divert a part of the cropland on their farms to approved soil, water, forestry, and wildlife conservation practices. Contract periods were 3, 5, and 10 years at the producer's option, except the contract period for designated acreage on which forest trees were established could be a maximum of 15 years. Annual payments, not to exceed $5,000 per year per person, were established for complying with terms of the contract. Cost-share payments were made to establish approved practices on designated acreage. Generally, the terms of the contract required compliance with soil bank permitted acreage and the crop allotments for the farm under the contract. The designated acreage could not be harvested or grazed unless authorized by the Secretary of Agriculture to alleviate hardship caused by flood, drought, or other natural disaster.

Target prices.—The price of wheat, feed grains, upland cotton, extra long staple cotton, and rice established by law, at which the Government will support farmer's income by making payments to qualifying farmers. Generally, payments are made if national average market prices fall below the target, thus assuring a certain minimum economic return. See *Deficiency payments.*

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